

**COMMISSION BASE VISIT
NSWC ANNAPOLIS AND
NSWC WHITE OAK
Monday, March 27, 1995**

COMMISSIONER ATTENDING:

Rebecca Cox

STAFF ATTENDING:

David Epstein - Annapolis

David Lyles - both

Jeff Mulliner - White Oak

Alex Yellin - both

Monday, March 27

6:45AM David Epstein departs Potomac, MD. (home) en route NSWC Annapolis, MD.

7:00AM David Lyles and Alex Yellin pick up Rebecca Cox at home en route NSWC Annapolis, MD.

7:45AM David Epstein arrives NSWC Annapolis.

8:00AM Arrive NSWC Annapolis, MD.

Rebecca Cox

David Lyles

Alex Yellin

****Contact: Roger Walker**

Phone: 301-261-1334

8:00AM to **Working breakfast and NSWC Annapolis base visit.**

12:00PM

11:30AM Jeff Mulliner departs Rosslyn en route NSWC White Oak, MD.

12:00PM Depart NSWC Annapolis en route NSWC White Oak, MD.

Rebecca Cox

David Lyles

Alex Yellin

12:00PM David Epstein departs Annapolis en route Washington, D.C.

1:00PM Arrive NSWC White Oak, MD from NSWC Annapolis, MD.
Rebecca Cox
David Lyles
Alex Yellin

****Contact CDR Mike Silvestri**
Phone: 301-394-1653

1:00PM to 5:00PM Working lunch and NSWC White Oak base visit.

1:00PM David Epstein arrives Washington, D.C., from Annapolis.

5:00PM Depart NSWC White Oak en route home.
Rebecca Cox
David Lyles
Alex Yellin
Jeff Mulliner

6:00PM David Lyles and Alex Yellin drop Rebecca Cox off at home.

DRAFT

DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

SUMMARY SHEET

NAVAL SURFACE WARFARE CENTER, CARDEROCK, **ANNAPOLIS DETACHMENT** **Annapolis, Maryland**

INSTALLATION MISSION

Provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Some specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

- Surface, Undersea and USMC Vehicle Vulnerability and Survivability Systems.
- Surface and Undersea Vehicle Active and Passive Acoustic Signatures and Silencing Systems.
- Surface and Undersea Vehicle Non-Acoustic Signatures and Silencing Systems.
- Surface and Undersea Vehicle Propulsion Machinery Systems and Components.
- Surface and Undersea Vehicle Auxiliary Machinery Systems and Components.

The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis.
- Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing.
- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC.
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DRAFT

DOD JUSTIFICATION

- Sharp declines in technical center workload through 2001 which leads to excess capacity in these activities.
- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

COST CONSIDERATIONS DEVELOPED BY DOD

- One-Time Cost: \$ 25.0 million
- Net Costs and Savings During Implementation: \$ 36.7 million (savings)
- Annual Recurring Savings: \$ 14.5 million
- Break-Even Year: 1 year
- Net Present Value Over 20 Years: \$ 175.1 million

MANPOWER IMPLICATIONS OF THIS RECOMMENDATION (EXCLUDES CONTRACTORS)

	<u>Military</u>	<u>Civilian</u>	<u>Students</u>
Baseline	2	418	-
Reductions	1	138	-
Realignments	1	280	-
Total	2	418	-

MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)

Out		In		Net (Loss)	
<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>
2	520	-	-	(2)	(520)

DRAFT

ENVIRONMENTAL CONSIDERATIONS

- NSWC Philadelphia is in a non-attainment area for CO.
- NSWC Carderock and NRL are currently in moderate non-attainment for CO and attainment for PM-10.
- In the case of each receiving site, a conformity determination may be required to assess the impact of this action.
- No endangered species or biological habitat issues.
- No wetlands on the base.
- Historic preservation concerns apply.
- NSWC Annapolis is in severe ozone non-attainment area.
- There are asbestos problems of unknown magnitude on base.

REPRESENTATION

Governor: Parris Glendening
Senators: Paul Sarbanes
Barbara Mikulski
Representative: Wayne Gilchrest

ECONOMIC IMPACT

- Potential Employment Loss: 1512 jobs (522 direct and 990 indirect)
- [City] MSA Job Base: 2,434,000 jobs
- Percentage: .1 percent decrease
- Cumulative Economic Impact (year-year): 0.0 percent decrease

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MILITARY ISSUES

- NSWC Philadelphia does not have facilities in any form for “Deep Ocean Machinery Simulation, Magnetic Fields, Submarine Fluid Dynamics, Electric Power, Electric Propulsion, and Machinery Acoustic Silencing.”
- This is the only location in the Western Hemisphere with the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures.
- NSWC closure would result in the loss of key technical personnel and the Navy’s laboratory capability to specify and validate cooling equipment which is responsive to the accelerated worldwide CFC production ban. Beginning in 1996, the Navy will be using a strategic stockpile of CFC, which will be depleted rapidly if ships cooling system developments permitting non-CFC refrigerants are delayed. Navy could be fined \$25,000 per day if the CFC replacement project is not completed on schedule. No other DoD or private sector facility has the capability to conduct this work.
- No other activity currently provides certain support for shipboard auxiliary machinery systems and “there is no single source that can provide the auxiliary machinery systems/components integration expertise and the critical facilities ... for 21st century ships and submarines.”
- “The Annapolis Site is the international leader in Machinery Silencing Technology. There is no other assembly of experienced technical experts and facilities capable of developing assessing the quietness of full-scale machinery at system operating conditions.”
- The Magnetic Fields Laboratory in Annapolis is “the only facility in the U.S. that can” support degaussing coil design and calibration procedures and the “loss of the Annapolis site would result in the severe degradation of the Navy’s capability and corporate memory in submarine electromagnetic silencing and surface ship EM signature exploratory development.”
- The United Kingdom has closed its facility and intends to use the facility at Annapolis.
- Annapolis has the capability to test manned vehicles under certified “man safe” conditions, without which at-sea testing would have to be conducted, with the inherent risks to human life due to potential failures. However, a manned vehicle was last tested in 1983.

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COMMUNITY CONCERNS/ISSUES

- Employees (particularly engineers) will be unable to obtain jobs in Annapolis if they choose not to move.
- COBRA assumptions regarding moving and availability of other Government jobs are unrealistic.
- There is sufficient space to enable tenant to move the remainder of its personnel on the compound and thus save several million dollars a year in rent.
- COBRA data reflects NSWC as it is today, not as dictated by BRAC 91. This makes the recurring savings appear much larger than it really is.
- COBRA data does not reflect the annual rent which would be incurred (\$1 million/year) if current tenant were forced to move into leased spaces.
- Some of the savings are really excess people which will be "allocated from excess capacity at receiving sites."
- Compound is surrounded by Naval Station Annapolis and can not be used unless base is reconfigured.
- U.S. will suffer major loss of capability which will take years to replace.

ITEMS OF SPECIAL EMPHASIS

- NSWC Annapolis had a higher military value than NSWC Philadelphia and the margin would have been even greater had not Philadelphia gotten higher scores for quality of life, which is primarily oriented towards military personnel (Annapolis has one or two).
- BRAC-93 voted NOT against a DoD proposal which would have had Annapolis staffed primarily by an equipment maintenance detachment. Most personnel would move to Philadelphia and Carderock and would come to use the equipment on an as-needed basis.
- Costs associated with the DoD tenant at NSWC Annapolis may not have been properly accounted for.
- If NSWC is to be closed, why is the recommendation not to move it to DoD owned space which offers a synergy with the Joint Spectrum Center?
- When will Navy have environmental conformity determinations completed?
- Was everything possible done to maximize sharing of overhead between the Naval Station and the NSWC?
- What are the reuse plans for the facility?
- COBRA Standards are questionable, especially moving costs, % employees getting jobs. % moving to keep jobs.
- DoD for Base Operating Support Costs and Real Property Maintenance are suspect.
- Note that if Annapolis were kept open (once White Oak is closed) \$15-\$20 M could be saved by keeping Annapolis open.

David Epstein/Navy/03/22/95 6:21 PM

UNCLASSIFIED

DOD Base Closure and Realignment Report to the Commission



DEPARTMENT OF THE NAVY

ANALYSES

AND

RECOMMENDATIONS
(Volume IV)

March 1995

UNCLASSIFIED

ATTACHMENT X-1

RECOMMENDATION FOR CLOSURE

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION DETACHMENT, ANNAPOLIS, MARYLAND

Recommendation: Close the Naval Surface Warfare Center, Carderock Division Detachment, Annapolis, Maryland, including the NIKE Site, Bayhead Road, Annapolis, except transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing. Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily Naval Surface Warfare Center, Carderock Division Detachment, Philadelphia, Pennsylvania; Naval Surface Weapons Center, Carderock Division, Carderock, Maryland; and the Naval Research Laboratory, Washington, D.C. The Joint Spectrum Center, a DoD cross-service tenant, will be relocated with other components of the Center in the local area as appropriate.

Justification: There is an overall reduction in operational forces and a sharp decline of the Department of the Navy budget through 2001. Specific reductions for technical centers are difficult to determine because these activities are supported through customer orders. However, the level of forces and of the budget are reliable indicators of sharp declines in technical center workload through 2001, which leads to a recognition of excess capacity in these activities. This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable. The total closure of this technical center reduces overall excess capacity in this category of installations, as well as excess capacity specific to this particular installation. It results in synergistic efficiencies by eliminating a major site and collocating technical personnel at the two primary remaining sites involved in hull, machinery, and equipment associated with naval vessels. It allows the movement of work to other Navy, DoD, academic and private industry facilities, and the excessing of some facilities not in continuous use. It also collocates RDT&E efforts with the In-Service Engineering work and facilities, to incorporate lessons learned from fleet operations and to increase the technical response pool to solve immediate problems.

Return on Investment: The total estimated one-time cost to implement this recommendation is \$25 million. The net of all costs and savings during the implementation period is a savings of \$36.7 million. Annual recurring savings after implementation are \$14.5 million with a return on investment expected in one year. The net present value of the costs and savings over 20 years is a savings of \$175.1 million.

NAVY INSTALLATION LIST -- BRAC 95

TECHNICAL CENTERS/LABORATORIES

Commander-in-Chief, Atlantic Fleet

Atlantic Fleet Weapons Training Facility, PR
Fleet Technical Support Center, Atlantic, Norfolk, VA
Fleet Technical Support Center, Atlantic, Norfolk Detachment, Mayport, FL
Fleet Technical Support Center, Atlantic, Norfolk Detachment, Norfolk, VA

Commander-in-Chief, Pacific Fleet

Pacific Missile Range Facility, Hawaii Area, Barking Sands, HI
Fleet Technical Support Center, San Diego, CA
Fleet Technical Support Center, Pearl Harbor, HI

Chief of Naval Operations

Operational Test and Evaluation Force, Norfolk, VA

Bureau of Medicine and Surgery

(c) Naval Medical Research Institute, Bethesda, MD
(c) Naval Health Research Center, San Diego, CA
Naval Aerospace Medical Research Laboratory, Pensacola, FL
(c) Naval Biodynamics Laboratory, New Orleans, LA
Naval Submarine Medical Research Laboratory, Groton, CT
Naval Dental Research Institute, Great Lakes, IL

Bureau of Naval Personnel

(c) Navy Personnel Research and Development Center, San Diego, CA

Chief of Naval Research

Naval Research Laboratory, Washington, DC
(c) Naval Research Laboratory Detachment, Underwater Sound Reference Laboratory, Orlando, FL
(rd) Office of Naval Research, Arlington, VA

Naval Air Systems Command

Naval Air Warfare Center, Headquarters, Washington, DC
Naval Air Warfare Center, Weapons Division, China Lake, CA
Naval Air Warfare Center, Weapons Division, Point Mugu, CA
(c) Naval Air Warfare Center, Aircraft Division, Indianapolis, IN
Naval Air Warfare Center, Aircraft Division, Patuxent River, MD
(c) Naval Air Warfare Center, Aircraft Division, Patuxent River Detachment, Warminster, PA

(c) Naval Air Warfare Center, Aircraft Division, Patuxent River Detachment, Deep Water Test Facility, Oreland, PA
(ce) Naval Air Warfare Center, Aircraft Division, Lakehurst, NJ
Naval Air Training Systems Division, Orlando, FL
(c) Naval Air Technical Services Facility, Philadelphia, PA
(c) Naval Aviation Engineering Service Unit, Philadelphia, PA

Naval Sea Systems Command

Naval Surface Warfare Center, Headquarters, Arlington, VA
Naval Surface Warfare Center, Crane Division, Crane, IN
(ce) Naval Surface Warfare Center, Crane Division Detachment, Louisville, KY
Naval Surface Warfare Center, Crane Division Detachment, Hydroacoustic Test Area, Sullivan, IN
Naval Surface Warfare Center, Dahlgren Division, Dahlgren, VA
(c) Naval Surface Warfare Center, Dahlgren Division Detachment, White Oak, MD
Naval Surface Warfare Center, Dahlgren Division, Coastal Systems Station, Panama City, FL
Naval Surface Warfare Center, Port Hueneme Division, Port Hueneme, CA
Naval Surface Warfare Center, Carderock Division, Carderock, MD
Naval Surface Warfare Center, Carderock Division Detachment, Philadelphia, PA
(c) Naval Surface Warfare Center, Carderock Division Detachment, Annapolis, MD
Naval Surface Warfare Center, Carderock Division, Acoustic Research Detachment, Bayview, ID
Naval Surface Warfare Center, Indian Head Division, Indian Head, MD
Naval Surface Warfare Center, Indian Head Division Detachment, Yorktown, VA
Naval Sea Logistics Center, Mechanicsburg, PA
Naval Sea Operations Support Detachment Technical Representative, Moorestown, NJ
Naval Undersea Warfare Center, Headquarters, Newport, RI
(c) Naval Undersea Warfare Center, Newport Division, Newport, RI
(r) Naval Undersea Warfare Center, Newport Division Detachment, New London, CT
Naval Undersea Warfare Center, Keyport Division, Keyport, WA
SEASPARROW Project Support Office, Arlington, VA
Naval Warfare Assessment Division, Corona, CA
AEGIS Combat Center, Wallops Island, VA
Naval Explosive Ordnance Disposal Technology Division, Indian Head, MD

Naval Ordnance Center, Indian Head, MD

Space and Naval Warfare Systems Command

Naval Command, Control, and Ocean Surveillance Center, Headquarters, San Diego, CA
Naval Command, Control, and Ocean Surveillance Center, RDT&E Division, San Diego, CA
(c) Naval Command, Control, and Ocean Surveillance Center, RDT&E Division, San Diego Detachment, Warminster, PA
Naval Command, Control, and Ocean Surveillance Center, In-service Engineering, East Coast Division, Charleston, SC
(ce) Naval Command, Control, and Ocean Surveillance Center, In-service Engineering, East Coast Division, Charleston Detachment, Norfolk, VA
(c) Naval Command, Control, and Ocean Surveillance Center, In-service Engineering, West Coast Division, San Diego, CA
Naval Command, Control, and Ocean Surveillance Center, In-service Engineering, West Coast Division, San Diego Detachment, Pearl Harbor, HI
(c) Naval Management Systems Support Office, Chesapeake, VA
Naval Technical Representative Office, Laurel, MD

Naval Facilities Engineering Service Center

Naval Facilities Engineering Service Center, Port Hueneme, CA

Naval Supply Systems Command

Navy Clothing and Textile Research Facility, Natick, MA

(c) Closure candidate (ce) Closure-except candidate
(r) Realignment candidate (rd) Redirect candidate

NAVAL SURFACE WARFARE CENTER - CARDEROCK, ANNAPOLIS DETACHMENT

Host: Naval Surface Warfare Center - Carderock, Detachment Annapolis

Major Tenant: Joint Spectrum Center; performs highly classified work; reports to Defense Information Systems Agency; 134 employees work on NSWC compound.

Location: Across Severn River from Naval Academy; 1 mile from downtown Annapolis
Surrounded by Naval Station Annapolis on land side and by Severn River.

Key Facilities:

- **Non-CFC Elimination**
- **Deep Ocean Vehicle Facility**
- **Propulsion Shaftline Facility**
- **Machinery Acoustic Silencing**
- **Submarine Fluid Dynamics**
- **Magnetic Fields Laboratory**
- **Advanced Electrical Machinery**

Manpower:

- 19 civilian personnel and one officer are due to relocate to NSWC Carderock at Carderock, MD and 261 civilian personnel are to relocate to Philadelphia.
- 138 civilian personnel and one officer will become excess.

Crucial issues and questions which should be discussed:

1. Relative to each major system on the basis.
 - Where else can testing be done if we close NSWC-Annapolis?
 - What is impact if we close down and then attempt to reopen - will equipment be damaged?
 - Are the project managers you support on this suite of equipment comfortable with Navy decision to close NSWC and eliminate opportunity to do testing here?
2. Besides the Navy, are there any US or foreign organizations who test or expect to test at NSWC Annapolis? Any private companies?

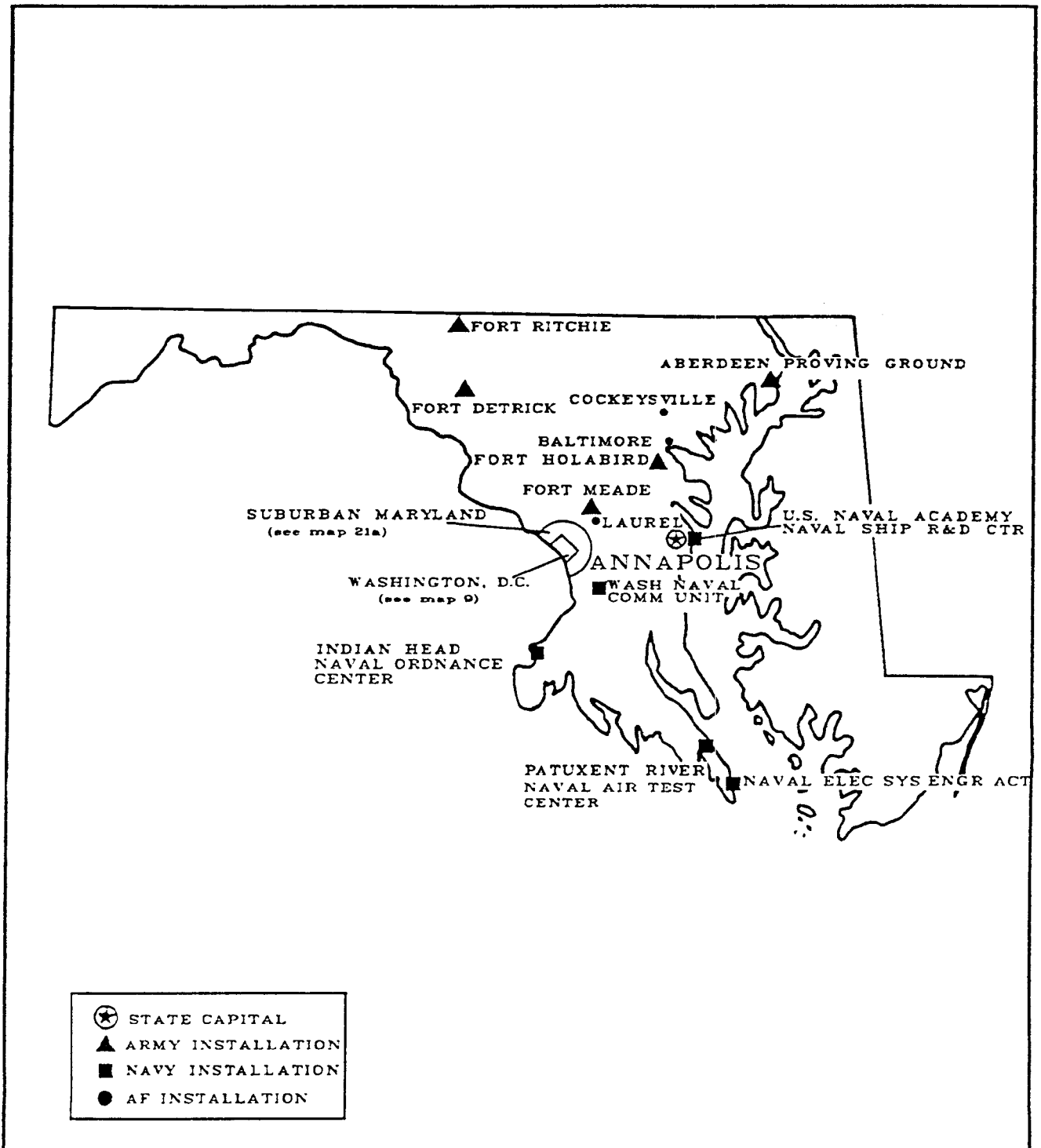
3. What has been happening to your workload over the past few years? Do you currently have enough work for your people? Do you expect to have enough in the future?

4. I'm concerned about various aspects of the cost analysis:

- Are the jobs to be eliminated really excess at Annapolis or does the excess exist elsewhere?
- Has Annapolis's overhead been reduced or is it scheduled to be reduced in conjunction with BRAC-91 adjustments?
- Explain the relationship and plans for your tenant, the Joint Spectrum Center. How much would be spent on rent if the JSC moved off the compound? Is there room for more JSC personnel to move onto the compound? How much money would that save?

MAP NO. 21

MARYLAND



Prepared By: Washington Headquarters Service
Directorate for Information
Operations and Reports

MARYLAND

FISCAL YEAR 1994

(DOLLARS IN THOUSANDS)

Personnel/Expenditures		Total	Army	Navy & Marine Corps	Air Force	Other Defense Activities
I. Personnel - Total		106,776	48,872	35,333	16,267	6,304
Active Duty Military		31,811	10,690	14,747	6,374	0
Civilian		37,475	14,596	14,243	2,332	6,304
Reserve & National Guard		37,490	23,586	6,343	7,561	0
II. Expenditures - Total		\$7,564,066	\$2,151,755	\$3,370,224	\$1,357,963	\$684,124
A. Payroll Outlays - Total		3,307,925	1,243,390	1,312,077	506,581	245,877
Active Duty Military Pay		941,705	356,570	395,629	189,506	0
Civilian Pay		1,532,608	516,328	667,572	102,831	245,877
Reserve & National Guard Pay		129,195	77,188	21,741	30,266	0
Retired Military Pay		704,417	293,304	227,135	183,978	0
B. Prime Contracts Over \$25,000 Total		4,256,141	908,365	2,058,147	851,382	438,247
Supply and Equipment Contracts		1,084,747	170,163	377,672	431,457	105,455
RDT&E Contracts		913,546	100,969	660,055	124,558	27,964
Service Contracts		1,914,383	368,787	951,961	288,843	304,792
Construction Contracts		280,592	205,573	68,459	6,524	36
Civil Function Contracts		62,873	62,873	0	0	0

Major Locations of Expenditures	Expenditures			Major Locations of Personnel	Military and Civilian Personnel		
	Total	Payroll Outlays	Prime Contracts		Total	Active Duty Military	Civilian
Baltimore	\$705,004	\$108,566	\$596,438	Aberdeen Prov Grnd	11,889	4,278	7,611
Aberdeen Prov Grnd	663,060	416,778	246,282	Annapolis	8,180	5,575	2,605
Bethesda	656,556	289,336	367,220	Fort Meade	8,115	5,256	2,859
Laurel	460,619	14,843	445,776	Andrews AFB	7,861	5,721	2,140
Annapolis	409,948	233,864	176,084	Bethesda	6,757	4,308	2,449
Rockville	388,645	23,406	365,239	Patuxent River NATC	5,620	2,569	3,251
Patuxent River NATC	362,969	226,624	136,345	Indian Head	2,883	466	2,397
Fort Meade	350,041	299,601	51,440	Brookmont	2,573	8	2,565
Andrews AFB	347,035	279,344	67,691	Fort Detrick	2,198	924	1,274
Gaithersburg	248,150	10,696	237,454	Baltimore	1,953	293	1,660

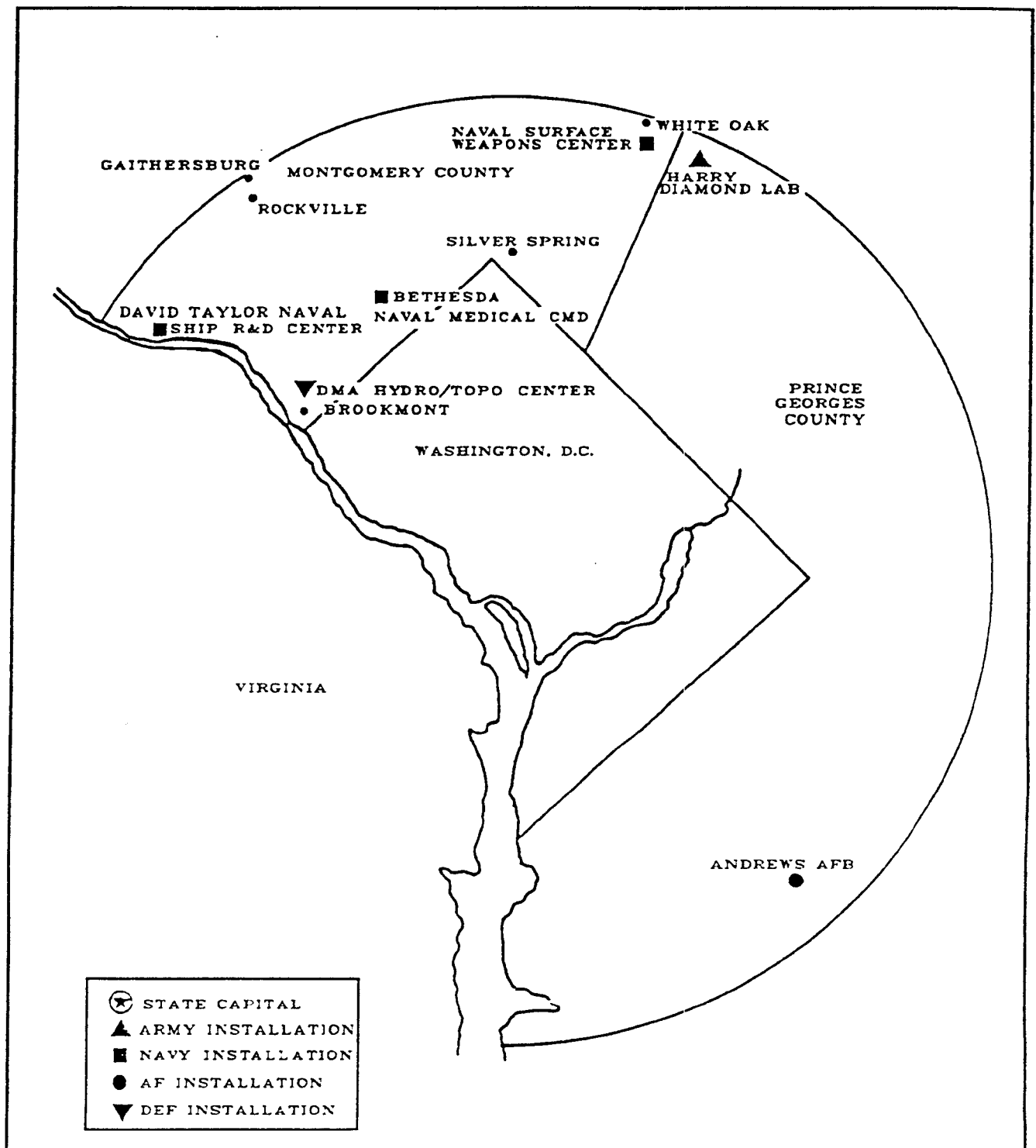
Prime Contracts Over \$25,000 (Prior Three Years)	Total	Army	Navy & Marine Corps	Air Force	Other Defense Activities
Fiscal Year 1993	\$3,992,356	\$697,518	\$1,875,179	\$1,060,292	\$359,367
Fiscal Year 1992	4,050,284	661,607	2,224,468	795,644	368,565
Fiscal Year 1991	4,128,541	753,129	1,801,705	1,152,852	410,855

Top Five Contractors Receiving the Largest Dollar Volume of Prime Contract Awards in this State	Total Amount	Major Area of Work	
		FSC or Service Code Description	Amount
1. WESTINGHOUSE ELECTRIC CORP	\$568,028	Radar Equipment, Airborne	\$246,729
2. JOHNS HOPKINS UNIVERSITY	442,281	RDT&E/Weapons-Engineering Development	440,293
3. TRACOR INC	198,862	Engineering Technical Services	76,267
4. INTERNATIONAL BUS MCHS CORP	187,095	Modification of Eq/Communication Equipment	125,606
5. MARTIN MARIETTA CORPORATION	151,637	Launchers, Guided Missile	80,126
Total of Above	\$1,547,903	(36.4% of total awards over \$25,000)	

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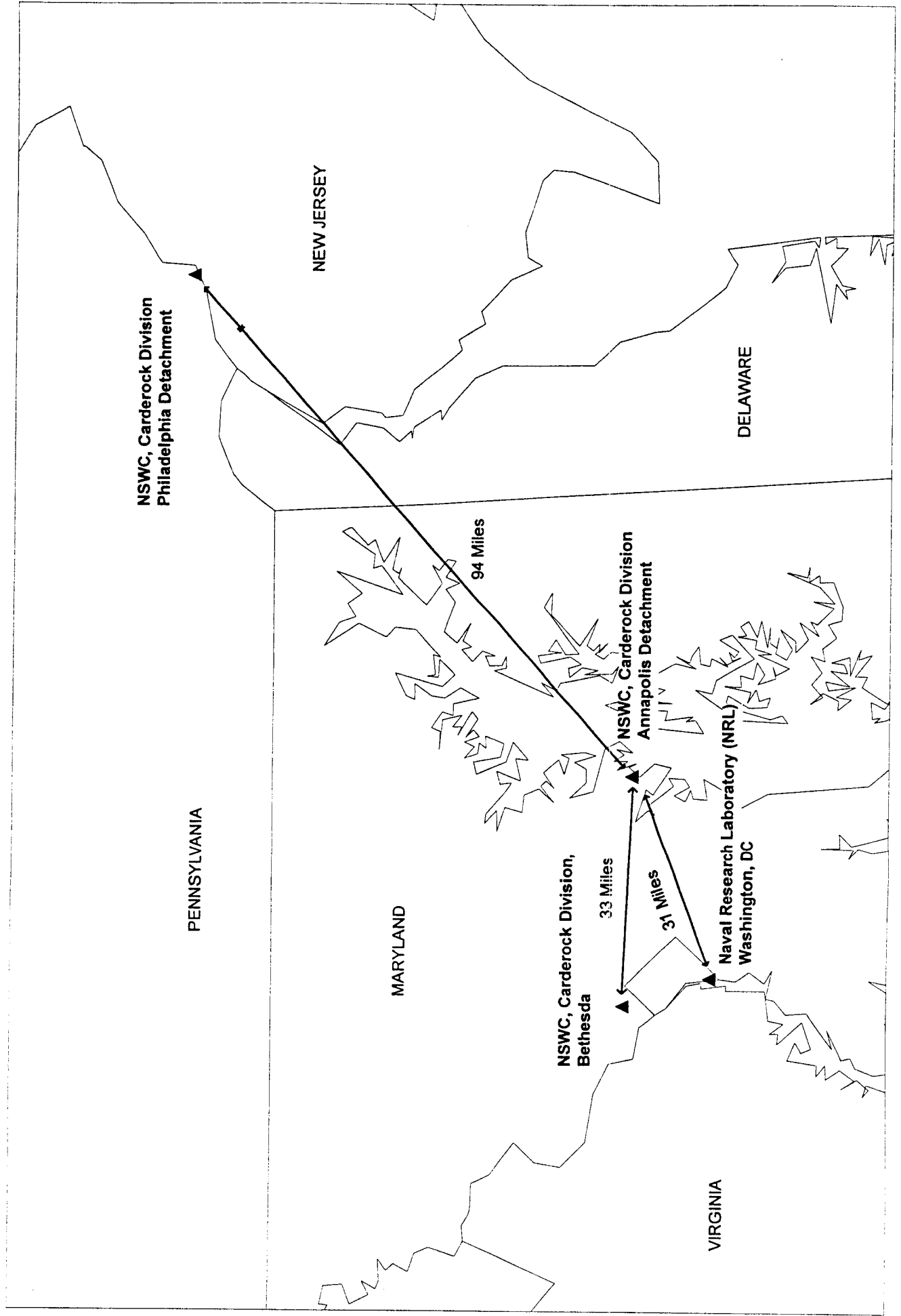
MAP NO. 21a

SUBURBAN MARYLAND



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Naval Surface Warfare Center (NSWC) Carderock Division, Detachment Annapolis, Maryland



CLOSURE HISTORY - INSTALLATIONS IN MARYLAND

22-Mar-95

SVC	INSTALLATION NAME	ACTION YEAR	ACTION SOURCE	ACTION STATUS	ACTION SUMMARY	ACTION DETAIL
A	ABERDEEN PROVING GROUND	88/91	DEFBRAC/DBCRC	ONGOING	REALGNUP	<p>1988 DEFBRAC: Close former NIKE site at the northwestern edge of the installation; completed FY 93; pending disposal</p> <p>1991 DBCRC: Army Research Institute MANPRINT function realigned from Alexandria, VA; completed FY 93</p> <p>6.1 and 6.2 materiel elements realigned from the Belvoir Research and Development Center, Fort Belvoir, VA; scheduled FY 93-95</p> <p>Army Materials Technology Laboratory (less structures element) realigned from Watertown, MA (Change to 1988 SECDEF Commission recommendation); scheduled FY 95</p>
	ADELPHI LABORATORY CENTER	91	DBCRC	ONGOING	REALGNUP	<p>1991 DBCRC: Directed Energy and Sensors Basic and Applied Research element of the Center for Night Vision and Electro-Optics realigned from Fort Belvoir, VA; scheduled FY 97</p> <p>Electronic Technology Device Laboratory realigned from Fort Monmouth, NJ; scheduled FY 95</p> <p>Battlefield Environment Effects element of the Atmospheric Science Laboratory realigned from White Sands Missile Range, NM; scheduled FY 97</p> <p>Research Facility realigned from Harry Diamond Laboratories, Woodbridge, VA; completed FY 94</p> <p>Realign fuze development and production mission (armament related) to Picatinny Arsenal, NJ; completed FY 94</p> <p>Realign fuze development and production mission (missile related) to Redstone Arsenal, AL; completed FY 94</p>
	ARMY RESERVE CENTER, GAITHERSBURG	88	DEFBRAC	COMPLETE	CLOSE	<p>1988 DEFBRAC: Close; completed FY 92; pending disposal</p>

CLOSURE HISTORY - INSTALLATIONS IN MARYLAND

22-Mar-95

SVC	INSTALLATION NAME	ACTION YEAR	ACTION SOURCE	ACTION STATUS	ACTION SUMMARY	ACTION DETAIL
	FORT DETRICK	88/91	DEFBRAC/DBCRC	ONGOING	REALGNDN	<p>1988 DEFBRAC: Letterman Army Institute of Research realigned from Presidio of San Francisco, CA (Changed to be disestablished by 1991 Defense Base Closure Commission)</p> <p>1991 DBCRC: Disestablish the U.S. Army Biomedical Research & Development Laboratory; transfer medical materiel research mission to the U.S. Army Medical Materiel and Development Activity at Fort Detrick; collocate environmental and occupational toxicology research with the Armstrong Laboratory, Wright-Patterson AFB, OH; scheduled FY 92-96</p>
	FORT HOLABIRD	88	DEFBRAC	ONGOING	PART CLOSE	<p>1988 DEFBRAC: Close that portion occupied by, and realign, the Crime Records Center of the Criminal Investigation Command to Fort Belvoir, VA; scheduled FY 95</p>
	FORT MEADE	88/90/93	DEFBRAC/PR/DBCRC	ONGOING	PART CLOSE	<p>1988 DEFBRAC: Close the ranges, airfield and training areas (approximately 9,000 acres); 7,600 acres transferred to the Department of the Interior on 16 Oct 91 in accordance with the FY 91 National Defense Authorization Act; 500 additional acres transferred to the Department of the Interior in FY 93; remaining 900 acres to be disposed of by FY 95</p> <p>1990 PRESS: Inactivate Headquarters, 1st Region, Criminal Investigation Command; scheduled FY 93</p> <p>1993 DBCRC: Naval Security Group Command (including Security Group Station and Security Group Detachment, Potomac) realigned from the National Capital Region; scheduled FY 96</p>
AF	FORT RITCHIE					
	ANDREWS AFB	90	PRESS	PROPOSED	REALGN	1990 Press Release indicated realignment. No specifics given.
	MARTIN STATE AGS					

CLOSURE HISTORY - INSTALLATIONS IN MARYLAND

22-Mar-95

SVC	INSTALLATION NAME	ACTION YEAR	ACTION SOURCE	ACTION STATUS	ACTION SUMMARY	ACTION DETAIL
D	DMA HYDROGRAPHIC/TOPOGRAPHIC CENTER	88	DEFBRAC	ONGOING	REALGNUP	1988 DEFBRAC: Activities realigned from Defense Mapping Agency site in Herndon, VA; scheduled FY 95
N	D W TAYLOR NAV SHIP R&D CTR					
	NAV ORDANCE COMMAND INDIAN HEAD	91/93	DBCRC	COMPLETED	REALIGNDN	1991 DBCRC: Recommended realignment as part of the Naval Surface Warfare Center, Combat & Weapons System Engineering and Industrial Base Directorate. 1993 DBCRC: Directed the disestablishment of the Sea Automated Data System Activity (SEAADSA) and relocation of needed functions, personnel, equipment, and support to NSWC Indian Head, MD.
	NAV SURFACE WEAPONS CTR WHITE OAK	91/93	DBCRC	ONGOING	DISESTAB	1991 DBCRC: Recommended realignment as part of the Naval Surface Warfare Center, Combat & Weapons Systems R&D Directorate. 1993 DBCRC: Directed the disestablishment of the White Oak Detachment of the Naval Surface Warfare Center. Relocate its functions, personnel, equipment, and support to NSWC-Dahlgren, VA; NSWC-Indian Head, MD; NSWC-Dahlgren, VA; and Coastal Systems Station, Panama City, FL. Property and facilities will be retained for relocation of Naval Sea Systems (NAVSEA) Command.
	NAVAL AIR TEST CTR, PAX RIVER					
	NAVAL COMM UNIT, WASHINGTON					
	NAVAL ELECTRONIC SYS ENGR ACT	93	DBCRC	ONGOING	CLOSE	1993 DBCRC: Directed the closure of Naval Electronic Systems Engineering Activity (NESEA) St Inigoes, MD and relocation to NESEC Charleston, SC. The ATC/ACLS facility, the Aegis Radio Room Laboratory, Identify Friend or Foe, Light Airborne Multipurpose System (LAMPS), and special warfare joint program support are to remain at St. Inigoes but be transferred to Naval Air Systems Command.

CLOSURE HISTORY - INSTALLATIONS IN MARYLAND

22-Mar-95

SVC	INSTALLATION NAME	ACTION YEAR	ACTION SOURCE	ACTION STATUS	ACTION SUMMARY	ACTION DETAIL
	NAVAL MEDICAL COMMAND-NCR					
	NAVY RADIO TRANS FAC ANNAPOLIS	93	DBCRC	ONGOING	DISESTAB	1993 DBCRC: Directed the disestablishment of the NRTF Annapolis. The Navy will retain real property.
	NSWC CARDEROCK, ANNAPOLIS DET	93	DBCRC	CANCELLED	CLOSE	1993 DBCRC: Directed that the NSWC - Carderock, Annapolis Det remain open despite OSD's recommendation to close the detachment.
	US NAVAL ACADEMY					

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The Sun (Baltimore)

March 5, 1995, Sunday, ARUNDEL EDITION

SECTION: LOCAL (NEWS), Pg. 1C

LENGTH: 749 words

HEADLINE: Closing notice jolts Naval Surface Weapons Center

BYLINE: John Rivera, Sun Staff Writer

BODY:

The scientists and engineers at the Naval Surface Weapons Center in Annapolis thought for sure they would be safe from an independent base-closing commission this year, especially since they had persuaded that panel to keep the center open only two years ago.

But last week the Department of Defense again recommended closing the center across the Severn River from the Naval Academy, and employees are surprised and angered.

"We kind of felt they looked at what we do, evaluated and decided, 'You have to stay open,' " said Sam Shank, a computer engineer who works with a sophisticated program that helps design and evaluate ships and their machinery systems. "The only thing that's changed in two years is our workload has increased."

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Nationwide, the Defense Department designated 146 military bases for closure or realignment. Five installations in Maryland were targeted. The recommendations will be reviewed by the Base Closure and Realignment Commission, which can delete or add bases to the list. The panel has until July 1 to send final recommendations to the president and Congress.

This is the third time in four years the weapons center has been targeted in the closing and realignment process. The size of the center, which opened in 1908, was reduced in 1991, but most of the employees affected are still there, waiting to be transferred to new facilities under construction in Bethesda.

Employees and lawmakers beat back the threatened closure two years ago, only to learn Tuesday of new plans to close the center, most likely by 1998, unless they can persuade the commission otherwise.

Of the 431 employees affected, about 138 would be laid off and the rest transferred, some to Bethesda, but most to Philadelphia, according to Jim Scott, a spokesman for the center's Annapolis Detachment.

The Sun (Baltimore), March 5, 1995

Commission members figured that the overall reduction in the Navy's budget and troop strength would lead to a decline in the workload of its technical centers over the next five years, according to a Pentagon document explaining the rationale for closing the center. Because of that decline, it makes more sense to consolidate the work done in Annapolis at the Navy's technical centers in Bethesda and Philadelphia, the document said.

The Pentagon estimates that it will cost \$ 25 million to close the center and transfer the remaining employees. The move would lead to an annual savings of \$ 14.5 million, amounting to a net savings of \$ 175.1 million over 20 years, officials estimate. "It's a tough time, but it's really a good news story for the taxpayer at large," said Cmdr. Roger Walker, the officer in charge of the center. "The Navy has more infrastructure than it needs right now."

But some employees say closing the center makes no sense because the research done there on the machinery of Navy ships is done nowhere else. And some of the equipment there is unique.

For example, the center's Deep Ocean Pressure Simulation Facility, which can duplicate the pressure at a depth of 27,000 feet, is the only one of its kind. It is too expensive to move and will be abandoned if the center closes, officials said.

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The Capital

March 07, 1995, Tuesday

SECTION: Front; Pg. A1

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The Capital, March 07, 1995

In 1993, his impassioned speech persuaded the commission to drop the facility from the hit list.

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The Annapolis resident retired three years ago as deputy director of machinery research and development.

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Bases without friends in high places were more vulnerable, the aide said.

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The Annapolis research center didn't have a strong patron in the Navy, the aide said.

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The Baltimore Sun

March 11, 1995, Saturday, FINAL EDITION

SECTION: TELEGRAPH (NEWS), Pg. 3A

LENGTH: 426 words

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BYLINE: Gilbert A. Lewthwaite, Washington Bureau of The Sun

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WASHINGTON -- Defenders of five Maryland bases tagged by the Pentagon this year for closure have won a home-field advantage. An appeals hearing for all proposed closings in the mid-Atlantic region will be held in Baltimore on May 4.

The Maryland congressional delegation pressed for the in-state location because hundreds of civilian jobs in the state are threatened by the Pentagon decision to put the five Maryland bases on this year's list of recommended closures.

It is the first time that the independent Base Closure and Realignment Commission has scheduled a regional hearing in Maryland. In previous rounds -- in 1988, 1991 and 1993 -- it has held hearings in Washington and Virginia.

"I think it serves our purposes to have it here," said Democratic Sen. Paul Sarbanes of Maryland. "We don't have to travel out of state, and our people aren't going to be inconvenienced."

"The community groups have been energized, and they are hard at work. I have no basis to be optimistic or pessimistic. You do what you have to do here, which is mount as effective a presentation as you can to the commission."

The Maryland installations targeted are Fort Ritchie in Western Maryland; the Naval Surface Warfare Centers in Annapolis and White Oak; the Army Publications Distribution Center in Middle River; and the Naval Medical Research Institute in Bethesda.

In a letter last week to Alan Dixon, a former senator from Illinois who is chairman of the base closure commission, the congressional delegation said the choice of Maryland as a regional hearing site would be appropriate, because the 1995 closure list heavily affects the state.

"I think this shows a very positive mood in the commission," said Democratic Sen. Barbara A. Mikulski of Maryland. "I think it shows they regard the Maryland bases to be of significant importance. I think it shows they want to be fair."

The commission has the power to endorse or alter the Pentagon's list. The hearing, one of 11 to be held around the nation, will give each affected community the chance to argue for keeping its local base open.

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The Baltimore Sun, March 11, 1995

its case to the commission for keeping its local base open. This year, each state will be given a block of time, based on the severity of the potential impact.

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The Capital

March 13, 1995, Monday

SECTION: Editorial; Pg. A10

LENGTH: 550 words

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PERHAPS THE Naval Surface Warfare Center in Annapolis one of the top federal employers in Anne Arundel County for many years is doomed. It is now on a government base-closing hit list for the third time in less than five years, which strongly suggests that someone powerful in the Pentagon's catacombs has drawn a bull's-eye over it and intends to keep firing until it goes down.

But Maryland's congressional delegation certainly hasn't given up on the center nor should it. It's mobilizing for another fight as the Defense Base Closure and Realignment Commission goes through its rounds of visits and hearings. (The crucial final report goes to the president on July 1).

Before we consent to the extinction of an 87-yearold institution that, despite recent personnel cutbacks, still brings a \$ 33 million annual payroll into this area, we should at least hear a case for its elimination that makes some sense. Such a case wasn't made two years ago. It hasn't been forthcoming this time, either.

Two years ago, the Defense Department plan was to eliminate 350 jobs at the center (200 workers shifted to Philadelphia and 50 to Bethesda, with about 100 jobs phased out). A skeleton crew of 80 would have remained to operate equipment for the use of Navy employees commuting from Philadelphia and elsewhere.

Why move researchers 100 miles from equipment they need? The Defense Department never produced a sensible answer for that, and the congressional delegation was able to mount a strong case that the \$ 7.8 million in projected savings would have been lost again through commuting costs and a decline in the quality of the facility's work. In the end, the commission voted unanimously against the plan.

And yet here we are again, less than two years later, having the same argument.

"It didn't make sense to move it then, and it doesn't now," notes Sen. Paul S. Sarbanes, D-Md., who is pledging that he and other legislators will "fight this as hard as we can."

The facility is on 65 acres on the north bank of the Severn. It does research, development, testing and evaluation of new materials and machinery for the Navy, some of it with underwater testing facilities available nowhere else. In 1993, in the midst of cutbacks, the research center won a record 26 patents a good indication of the amount of creative thinking going on there.

The Capital, March 13, 1995

The center's staff, we should note, is civilian, and many of the key personnel have been there a long time. These are not military personnel, used to packing up and moving on short notice. For many of them, the closing of the [redacted] facility will be the end of their government careers.

Of course, no military facility can be considered a permanent entitlement for a community. With the Defense Department facing a need to scale the U.S. military down to post-Cold War dimensions, some installations will have to go.

But, on the other hand, a valuable research facility which produces work useful to the Navy and to civilians shouldn't be disassembled and scattered to the four winds just because the Pentagon needs to cut something. There must be good reasons. So far, in the case of this facility, we don't have any.

So it's up to the congressional delegation to convince the commission again. We wish it luck.

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Key issues identified section

- The professional staff at the installation indicate that they are unlikely to move to Philadelphia. This, along with the difficulty of moving sensitive equipment could result in the substantial delay of ongoing projects. Several major projects, particularly the one to develop equipment to handle CFCs might be adversely impacted. This would jeopardize international treaties and could be extremely expensive. In the case of other projects, there is the possibility that lead ships in some classes might be built without the enhance systems being developed at Annapolis. Those systems might be later retrofitted at additional cost.
- It will be difficult if not impossible to move some of the equipment at Annapolis. The Deep Ocean Vehicle Facility would simply be abandoned. This could result in costly testing at sea with less reliability. Concern was also expressed over the magnetics, noise, and vibration at NSWC, particularly because of the industrial nature of the shipyard complex and proximity to the major interstate highway and airport.
- Costs for a tenant, the Joint Spectrum Center(JSC), a Defense Information Systems Agency (DISA) activity could increase by approximately one million dollars if they had to move into commercial space. This cost was not considered. The Joint Spectrum Center supporting contractor, the Illinois Institute of Technology Research Institute, is currently paying 1.5 million dollars per year to rent commercial space in Annapolis which is reimbursed by JSC. There would be sufficient space (after the departure of Materials Departments Staff to Carderock, per BRAC '91) at NSWC to house all of the JSC staff including some currently in Washington, as well as ITRI. Cost of renovating base facilities and adequacy of space at NSWC or JSC are being examined.
- Dean Shapiro of the Naval Academy pointed out that the loss of NSWC would result in greatly diminished opportunities for Naval Academy midshipmen, particularly engineering majors to gain exposure to practical engineering and R&D work. Faculty members would also lose opportunities to get good summer projects.

Document Separator

BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION DETACHMENT ANNAPOLIS, MARYLAND

MARCH 27, 1995

LEAD COMMISSIONER:

Commissioner Rebecca Cox

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Lyles
Mr. Alex Yellin
Mr. David Epstein

LIST OF ATTENDEES:

Senator Paul Sarbanes
Senator Barbara Mikulski
Representative Wayne Gilchrest
Representative Steny Hoyer
Governor Parris Glendening
Rear Admiral David Sargeant, Jr. (USN) (Commander, Naval Surface Warfare Center);
Captain James Baskerville (USN) (Commander, Naval Surface Warfare Center, Carderock Division);
Commander Roger Walker (USN) (Officer-in-Charge, Naval Surface Warfare Center, Carderock Division, Annapolis Detachment);
Colonel George "Ron" Flock (USAF), Commander, Joint Spectrum Center
Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate
CAPT Robin Bosworth (Ret.) - prior Officer-in-Charge NSWC Annapolis

BASE'S PRESENT MISSION: is to provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

- Surface, Undersea and USMC Vehicle Vulnerability and Survivability Systems
- Surface and Undersea Vehicle Active and Passive Acoustic Signatures and Silencing Systems
- Surface and Undersea Vehicle Non-Acoustic Signatures and Silencing Systems

- Surface and Undersea Vehicle Propulsion Machinery Systems and Components
- Surface and Undersea Vehicle Auxiliary Machinery Systems and Components

The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis
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- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DOD JUSTIFICATION:

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- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
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MAIN FACILITIES REVIEWED:

- Visit began with a 15 minute overview in the Melville Room of the Headquarters Building.
- Two hour tour of the base, including the Non-CFC Elimination lab, the Deep Ocean Vehicle Facility, the Propulsion Shaftline Facility, the Electrical Power Technology laboratory, the Machinery Acoustic Silencing lab, the Fluid Dynamics facility, the Magnetics Field Lab, the Pulse Power Systems complex, and the Advanced Electrical Machinery facility.
- Mr. Tim Doyle lead a 25 minute wrap-up and answered questions.
- Colonel Flock, USAF described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and described his interest in consolidating his personnel.
- Dean Shapiro of the United States Naval Academy discussed the benefits to the Academy its faculty and the Midshipmen who work on projects at NSWC Annapolis.

KEY ISSUES IDENTIFIED:

- Dean Shapiro of the Naval Academy pointed out that the loss of NSWC would result in greatly diminished opportunities for Naval Academy midshipmen, particularly engineering majors, to gain exposure to practical engineering and R&D work. Faculty members would also lose opportunities to get good summer projects.
- Several major projects, particularly the one to develop equipment to handle the replacement for CFCs might be adversely impacted. In the case of CFC replacement, international treaties would probably compel the Navy to avoid much if any delays, despite acknowledgment that the move might set the project back between one and two years and possibly more if personnel losses were severe. In the case of other projects, there is the possibility that lead ships in some classes might be built without the enhanced systems being developed at Annapolis. Those systems might later be retrofitted at additional cost.
- The Joint Spectrum Center, a Defense Information Systems Agency (DISA) activity, would be forced to move off base if NSWC closed. JSC could move to Fort Meade, to leased space in Annapolis, or elsewhere. If JSC leased space in the Annapolis area, the employees moving off the base would require a space which would lease for about \$1 million per year. In addition, the contractor supporting JSC (Illinois Institute of Technology Research Institute (IITRI) was paying \$1.5 M per year in rent to house its employees and JSC reimbursed that cost. There was probably sufficient space (after the departure of Materials Department staff to Carderock, per BRAC 91) at NSWC to house all of the JSC staff, including some currently in Washington as well as IITRI. Costs of renovating base facilities and adequacy of space at NSWC for JSC are being examined.
- Concern was expressed over the magnetic, noise, and vibration at NSWC Philadelphia, particularly because of the industrial nature of the shipyard complex (shipyard has closed), and proximity to the major interstate highway and airport.

COMMUNITY CONCERNS RAISED:

- Navy claims on savings were disputed.
- Programs will be disrupted.
- Key people will be lost and a winning team will be broken up.
- Synergy with Naval Academy will be lost.
- There will be no benefit from sale of or reuse of land, since NSWC is surrounded by Naval Station Annapolis.
- Philadelphia and Carderock do not have the magnetic, sound, and vibration free environments to conduct testing.
- Lives of employees will be disrupted.
- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Commissioner Cox requested that Mr. Epstein

- Investigate various aspects of the DoD claimed savings.
- Obtain information on the 78 major capabilities of the NSWC community, with particular emphasis on the statement that NSWC Annapolis has primary responsibility for 3 of the top 10 items on that list.

Document Separator

BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION DETACHMENT

→ PHILADELPHIA, PA ←

APRIL 6, 1995

LEAD COMMISSIONER:

None

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Epstein

LIST OF ATTENDEES:

Captain James Baskerville (USN) Commander, Naval Surface Warfare Center, Carderock Division;

Dr. William Middleton, Assistant Director, Naval Surface Warfare Center, Carderock Division

Captain Harry Rucker (USN) Commanding Officer, Naval Surface Warfare Center, Carderock Division, Philadelphia Detachment

Mr. Tim Doyle, Head Power Systems Department and BRAC Coordinator for Machinery R & D Group, Naval Surface Warfare Center, Carderock Division, Annapolis Detachment

BASE'S PRESENT MISSION: is engineering and testing of machinery components, materials and systems that are in operation in the Navy fleet or under consideration by acquisition or life cycle managers to be placed in operation in the fleet.

DOD RECOMMENDATION:

- Not applicable; Command is a receiver.

DOD JUSTIFICATION:

- Not applicable; Command is a receiver

MAIN FACILITIES REVIEWED:

- Visit began with a 15 minute overview in the Command Conference Room. Captain Baskerville introduced Captain Rucker, who explained the tentative reutilization plans and the impact of BRAC 91.
- The overview was followed by a two hour tour of the base, which included visits to buildings 4, 29, 77H, 619, and 1000 which are envisioned as housing the 261 personnel expected to move to Philadelphia from Annapolis. The Firehouse, which could accommodate some employees if additional employees were to be moved to Philadelphia (but which will not be needed if only 261 employees are moved) was not visited.
- The visit also included visits to major facilities of NSWC Philadelphia and to administrative office space, some of which would be available to Annapolis personnel when shipyard personnel depart. CAPT Rucker assured Mr. Epstein that there were 500 additional sets of modular furniture in a condition similar to that viewed during the tour of shipyard and NSWC spaces. The modular furniture viewed was in good, albeit not new condition.

KEY ISSUES IDENTIFIED:

- NSWC Philadelphia would probably have to modify large high-ceiling bayed buildings to make them compatible with office space.
- Captain Baskerville acknowledged that the technology to ensure vibration and sound silencing did not exist in all cases, but stated that he was confident it could be made available at some price.
- The agreement with the city includes the understanding that no shipyard tenants would be permitted to do anything which interfered with the Navy.
- There was plenty of space for NSWC Annapolis employees and equipment.
- The deep depth pressure facility could be moved to Annapolis at some cost. Dr. Middleton and Captain Baskerville estimated that would cost about \$15 million. They noted that it had been built in the Philadelphia area and was barged to Annapolis. It would have to be barged back to Philadelphia, including digging a trench so the barge could get to the test equipment facility.
- There was a significant effort to enhance the synergy consisting of joint programs, develop research projects with Philadelphia area colleges, including Villanova and Drexel, and to develop and support small technical companies which might support NSWC's work.
- The retention of physical and operational connectivity is essential to maintaining the systems focus.
- The cost of office space for NSWC Annapolis personnel at NSWC Philadelphia is not reflected in the COBRA.

COMMUNITY CONCERNS RAISED:

- As U.S. downsizes its military, high tech superiority becomes crucial.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Not applicable -- not commissioner visit

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BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

19 MAY 1995

LEAD COMMISSIONER:

Commissioner Al Cornella

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Epstein

LIST OF ATTENDEES:

CAPT James Baskerville (USN), Commander, NSWC, Carderock Division
Dr. William Middleton, Chief of Staff, Carderock Division
CDR Roger Walker (USN), Officer-in-Charge, NSWC, Carderock Division, Annapolis Det.
COL George "Ron" Flock (USAF), Commander, Joint Spectrum Center
Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate
Mr. James Corder (retired) - previous Deputy Director, Machinery R&D Directorate

BASE'S PRESENT MISSION: is to provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

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- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 10 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

In addition to the issues identified during the visit by Commissioner Cox, the issues listed below were identified. A copy of the write-up of the visits by Commissioners Cox and Montoya were provided to Commissioner Cornella.

- It may be more difficult to hire top quality engineers in Philadelphia. In response to questions posed by Commissioner Cornella and Mr. Epstein, CAPT Baskerville and COL Flock acknowledged that their presence in the Annapolis area, with its high quality of life, facilitated personnel retention, even when higher paying jobs were offered.
- The sequence in which the Commissioners vote on NSWC Annapolis and White Oak could be important because if they close the first one, then when they vote on whichever of these is voted on last, the Commissioners will be told there is an additional cost of \$15-\$17 M cost associated with closing this last site. This sum represents the estimated cost of building a new electromagnetic free research facility at NSWC Carderock or some other location.
- The recommendation to close the deep pressure activity appears to have originated from the BSEC or BSAT.
- Despite earlier indications to the contrary, NSWC Philadelphia can accommodate the Annapolis facilities scheduled to be relocated while still keeping the facilities within an area which approximates that of a destroyer.
- The COBRA contains some standard moving costs, rather than the costs of moving equipment as specified in the NSWC data call. Related MILCON costs were also omitted from the COBRA.
- The COBRA does not reflect any costs for training, but this was consistent with Navy's general policy.
- In order to enable labs such as Annapolis and Carderock to remain viable in a time of decreasing budgets, the labs must be allowed to compete for some private sector work and to hire new engineers.
- The Deep Ocean Vehicle Facility could be moved, by barge, to NSWC Philadelphia for about \$15 M.

COMMUNITY CONCERNS RAISED:

- Navy claims on savings were disputed.
- Programs will be disrupted.
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- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

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BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

1 MAY 1995

LEAD COMMISSIONER:

Commissioner Benjamin Montoya

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Epstein

LIST OF ATTENDEES:

Senator Paul Sarbanes

Dr. Ira Blatstein, Technical Director, Naval Surface Warfare Center

Dean Shapiro, United States Naval Academy

CAPT James Baskerville (USN), Commander, NSWC, Carderock Division

Dr. Richard Metrey, Director, Carderock Division

Dr. William Middleton, Chief of Staff, Carderock Division

CDR Roger Walker (USN), Officer-in-Charge, NSWC, Carderock Division, Annapolis Det.

COL George "Ron" Flock (USAF), Commander, Joint Spectrum Center

Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate

Mr. James Corder (retired) - previous Deputy Director, Machinery R&D Directorate

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- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 10 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

In addition to the issues identified during the visit by Commissioner Cox, the issues listed below were identified. A copy of the write-up of Commissioner Cox's visit was provided to Commissioner Montoya.

- It may be more difficult to hire top quality engineers in Philadelphia. In response to questions posed by Commissioner Montoya and Mr. Epstein, CAPT Baskerville and COL Flock acknowledged that their presence in the Annapolis area, with its high quality of life, facilitated personnel retention, even when higher paying jobs were offered.
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- Lives of employees will be disrupted.
- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Commissioner Montoya requested that NSWC Carderock division provide details regarding the loss of the Deep Pressure Tank and the Fluid Dynamics Facility. He expressed interest in the cost and the impact on the programs that would have used those facilities if they were available.

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BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

27 MARCH 1995

LEAD COMMISSIONER:

Commissioner Rebecca Cox

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Lyles

Mr. Alex Yellin

Mr. David Epstein

LIST OF ATTENDEES:

Senator Paul Sarbanes

Senator Barbara Mikulski

Representative Wayne Gilchrest

Representative Steny Hoyer

Governor Parris Glendening

Rear Admiral David Sargeant, Jr. (USN) (Commander, NSWC);

Captain James Baskerville (USN) (Commander, NSWC, Carderock Division)

Commander Roger Walker (USN) (Officer-in-Charge, NSWC, Carderock Division, Annapolis Detachment)

Colonel George "Ron" Flock (USAF), Commander, Joint Spectrum Center

Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate

CAPT Robin Bosworth (Ret.) - prior Officer-in-Charge NSWC Annapolis

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- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 25 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

- The professional staff at the installation indicated that they are unlikely to move to Philadelphia. This, along with the difficulty of moving sensitive equipment, could result in the substantial delay of ongoing projects. Several major projects, particularly the one to develop equipment to handle CFCs might be adversely impacted. This would jeopardize international treaties and could be extremely expensive. In the case of other projects, there is the possibility that lead ships in some classes might be built without the enhanced systems being developed at Annapolis. Those systems might be later retrofitted at additional cost.
- It will be difficult if not impossible to move some of the equipment at Annapolis. The Deep Ocean Vehicle Facility would simply be abandoned. This could result in costly testing at sea with less reliability. Concern was also expressed over the magnetic, noise, and vibration at NSWC Philadelphia, particularly because of the industrial nature of the shipyard complex and proximity to the major interstate highway and airport.
- Costs for a tenant, the Joint Spectrum Center (JSC), a Defense Information Systems Agency (DISA) activity could increase by one million dollars per year if they have to move into commercial space. These costs were not considered. The JSC supporting contractor, the Illinois Institute of Technology Research Institute, is currently paying \$1.5 M per year to rent commercial space in Annapolis which is reimbursed by JSC. There would be sufficient space (after the departure of Materials Department Staff to Carderock, per BRAC '91) at NSWC to house all of the JSC staff including some currently in Washington, as well as IITRI. Cost of renovating base facilities and adequacy of space at NSWC Annapolis for JSC are being examined. If Annapolis were to close, JSC could move to Fort Meade, to leased space in Annapolis, or elsewhere.
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COMMUNITY CONCERNS RAISED:

- Navy claims on savings were disputed.
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- Key people will be lost and a winning team will be broken up.
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- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Commissioner Cox requested that Mr. Epstein

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- Obtain information on the 78 major capabilities of the NSWC community, with particular emphasis on the statement that NSWC Annapolis has primary responsibility for 3 of the top 10 items on that list.

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DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

SUMMARY SHEET

NAVAL SURFACE WARFARE CENTER, CARDEROCK, ANNAPOLIS DETACHMENT ANNAPOLIS, MD

INSTALLATION MISSION is generally stated as to provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Some specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

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- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

COST CONSIDERATIONS DEVELOPED BY DOD

- One-Time Cost: \$ 25.0 million
- Net Costs and Savings During Implementation: \$ 36.7 million (savings)
- Annual Recurring Savings: \$ 14.5 million
- Break-Even Year: 1 year
- Net Present Value Over 20 Years: \$ 175.1 million

MANPOWER IMPLICATIONS OF THIS RECOMMENDATION (EXCLUDES CONTRACTORS)

	<u>Military</u>	<u>Civilian</u>	<u>Students</u>
Baseline	2	418	-
Reductions	1	138	-
Realignments	1	280	-
Total	2	418	-

MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)

Out		In		Net (Loss)	
Military	Civilian	Military	Civilian	Military	Civilian
2	520	-	-	2	520

ENVIRONMENTAL CONSIDERATIONS

- NSWC Philadelphia is in a non-attainment area for CO.
- NSWC Carderock and NRL are currently in moderate non-attainment for CO and attainment for PM-10.
- In the case of each receiving site, a conformity determination may be required to assess the impact of this action.
- No endangered species or biological habitat issues
- No wetlands on the base
- Historic preservation concerns apply
- NSWC Annapolis is in severe ozone non-attainment area
- There are asbestos problems of unknown magnitude on base

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REPRESENTATION

Governor: Parris Glendening
Senators: Paul Sarbanes
Barbara Mikulski
Representative: Wayne Gilchrest

ECONOMIC IMPACT

- Potential Employment Loss: 1512 jobs (522 direct and 990 indirect)
- Annapolis, MD MSA Job Base: 2,434,000 jobs
- Percentage: .1 percent decrease
- Cumulative Economic Impact (year-year): 0.0 percent decrease

MILITARY ISSUES

- NSWC Philadelphia does not have facilities in any form for “Deep Ocean Machinery Simulation, Magnetic Fields, Submarine Fluid Dynamics, Electric Power, Electric Propulsion, and Machinery Acoustic Silencing.”
- This is the only location in the Western Hemisphere with the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures.
- NSWC closure would result in the loss of key technical personnel and the Navy’s laboratory capability to specify and validate cooling equipment which is responsive to the accelerated worldwide CFC production ban. Beginning in 1996, the Navy will be using a strategic stockpile of CFC, which will be depleted rapidly if ships cooling system developments permitting non-CFC refrigerants are delayed. Navy could be fined \$25,000 per day if the CFC replacement project is not completed on schedule. No other DoD or private sector facility has the capability to conduct this work.
- No other activity currently provides certain support for shipboard auxiliary machinery systems and “there is no single source that can provide the auxiliary machinery systems/components integration expertise and the critical facilities ... for 21st century ships and submarines.”
- “The Annapolis Site is the international leader in Machinery Silencing Technology. There is no other assembly of experienced technical experts and facilities capable of developing assessing the quietness of full-scale machinery at system operating conditions.”
- The Magnetic Fields Laboratory in Annapolis is “the only facility in the U.S. that can “support degaussing coil design and calibration procedures and the “loss of the Annapolis site would result in the severe degradation of the Navy’s capability and corporate memory in submarine electromagnetic silencing and surface ship EM signature exploratory development.”
- The United Kingdom intends to use the facility at Annapolis.

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- Annapolis has the capability to test manned vehicles under certified “man safe” conditions, without which at-sea testing would have to be conducted, with the inherent risks to human life due to potential failures. However, a manned vehicle was last tested in 1983.

COMMUNITY CONCERNS/ISSUES

- Employees (particularly engineers) will be unable to obtain jobs in Annapolis if they choose not to move.
- COBRA assumptions regarding moving and availability of other Government jobs are unrealistic.
- There is sufficient space to enable tenant to move the remainder of its personnel on the compound and thus save several million dollars a year in rent.
- COBRA data reflects NSWC as it is today, not as dictated by BRAC 91. This makes the recurring savings appear much larger than it really is.
- COBRA data does not reflect the annual rent which would be incurred (\$1 million/year) if current tenant were forced to move into leased spaces.
- Some of savings are really excess people which will be “allocated from excess capacity at receiving sites.”
- Compound is surrounded by Naval Station Annapolis and can’t be used unless base is reconfigured.
- U.S. will suffer major loss of capability which will take years to replace.

David Epstein/Navy/08/09/95 2:32 PM

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ITEMS OF SPECIAL EMPHASIS

- How often must these items be reused? Are people going to routinely come to Annapolis to use the equipment and will there be people left in Annapolis to maintain the equipment?
- Are the jobs to be eliminated overhead or is this an effort to reduce productive WYs?
- Is it worthwhile to reduce WYs and keep base open -- what is the overhead cost?
- Did Navy pick up the costs (overhead) which had been borne by the NSWC?
- Was the impact on jobs based on the impact on Annapolis or Baltimore?
- Did the cost of relocating the Electromagnetic Compatibility Analysis Center get included in the COBRA?
- Why is the recommendation not to move Joint Spectrum Center to DoD facility or to facility with synergy
- What are the costs, if any, associated with the loss of key personnel and the training requirements assoc and other aspects and impacts on their projects?
- Are there any pieces of equipment which must be left in Annapolis and reused?
- Why is the recommendation not to move Joint Spectrum Center to DoD facility or to facility with synergy
- When will Navy have environmental conformity determinations completed?
- Why did Annapolis get credit for being a host? Is that an advantage or a disadvantage?
- Could obtain additional space by kicking out their tenant!! Did Annapolis spare space reflect post BRAC-91 office space availability?
- Does the closing of NSWC Annapolis affect the overhead of the Naval Station -- are these additional costs included in the COBRA?
- Are the increased costs of putting the tenant(Electromagnetic Compatibility Analysis Center) off-base reflected in the COBRA?
- For each weapon system, explain what is happening to the program; among other aspects of the program's future, where is continued RDT&E, if any, going to be conducted
- Why did the Navy not close Philadelphia which has lower military value and has a similar mission (but without the tremendous testing capability)?
- Why does Housing data call show only 18% of housing units occupied -- s/b 50%
- Total contract WY is 101.6, include ruction 17.0, facilities support 30.0, miss supp 54.6
- Explain anticipated funding for FY 88 and beyond, adjusting for workload already slated to leave Annapolis
- What are the reuse plans for the facility?
- CDNSWC-A is surrounded by Naval Station Annapolis
- Will the Navy certify that this land will not be transferred to any organization except through sale at open-market free market prices
- Were the costs of services provided to non-tenants included in the COBRA?
- The violent and property crime rates in the spreadsheet do not correctly reflect the certified data
- Annapolis data doesn't include Naval Academy MWR, BOQ, etc.
- Explain points on cost (increasing, then decreasing)
- Data call 33 acreage p 19 appears inconsistent w/ prior page

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- COBRA Standards questionable, especially moving costs, % employees getting jobs, % moving to keep jobs
- Navy estimates of MILCON in Carderock seem strange -- one building is under \$100 sqft, which seems very low; another building is \$800 per square foot, which seems high
- What people (skills/divisions) are moving to Philadelphia and Bethesda. What jobs are being eliminated?
- How, if at all, do you account for cost of lost expertise?
- BOS cost FY96 are \$6K non-DBOF and \$3.7M RPMA and other BOS of \$12.9M and \$3.0 depreciation
- Examine BOS and RPMA costs -- \$2.744 M for RPMA and \$5.233 for BOS ??
- Look at BOS and RPMA reductions in Annapolis and gains in Philadelphia ; losses should be based on Naval Station and NSWC combined ; also be careful that costs and reductions are based on post-BRAC-91!!! !!
- Note that if Annapolis were kept open (once White Oak is closed) could save \$15-\$20 M by keeping Annapolis open
- What is cost of moving Sea Survival/ Life Saving Systems to Philadelphia?
- What is meant on page 1-3R by replication of or replication and integration -- enclosure (1) in data call? Are there additional costs?
- Other losses cited on p 1-4R
- What are costs of mothballing the Deep Ocean Vehicle Simulation Facility?
- Did they include cost of non-technical impacts?
- What happened to one-time unique costs to Philadelphia on enclosure 1-7R \$24.4 to Phila and \$5M to White Oak
- Enclosure (2) 2-8R and 2-9R appear to show only 3 civilians going to Carderock-- COBRA shows 20 (this should be corrected to include White Oak)
- Are COBRA assumptions for number of people making move realistic?
-
- | | | | | | |
|----------|----|----|-----|-----|----------------------------------|
| pp2-7R | 4 | 25 | 29 | 5 | ists, engineers, and technicians |
| pp 2-10R | 10 | 98 | 108 | 104 | |
| p2-12R | 63 | 25 | 88 | 82 | |
| p2-14R | 6 | 41 | 47 | 53 | |
| p2-21R | 22 | 0 | 22 | 16 | |
- Explain what the above means in terms of WY of scientists etc (107, 188, 294, 260)
- What is support provided by Annapolis Naval Station or Contact and what is cost p 2-32R
- What happened to one-time unique costs on p2-33R of \$25.8M ??
- What happened to one-time uniques cost #8-#11 on p 2-35R, totaling \$1.25M
- R&D program for CFC if slowed could result in fines of up to \$25 K per day. Program for CFC-12 refrigeration plants scheduled for completion in FY95 and for CFC-114 in 2002. "Terminating the R&D program in 1998 will compromise the CFC-114 conversion schedule."
- One-time costs \$56.5M don't match COBRA (2-42R)
- Miscellaneous recurring costs of \$586 K don't match COBRA 2-42R
- Recurring cost of \$380K p 3-4R
- p 3-2R refurbish PNSY building to be used by NSWC?

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- 3-12R shows \$1 M in MILCON, but cobra said \$8 M -- what gives
- Why does ECAC need 36,000 sqft for 134 people -- that's 270 sqft per person, a lot
- Why not move ECAC into NSWC, including its contractor?
- \$1 M recurring cost in 3-19R for ECAC rent -- where is this in COBRA?? -- this is for 134 Joint Spectrum Center people in Annapolis with contractors. 134 people at 150 sqft at \$16 is much less. Why is this so high? Why not move ECAC and contractors back into Annapolis and maintain equipment??
- What happened to one-time costs p2-25R for moving equipment \$1.7 M
- p 2-29R Mothballing costs and lease space appear to have been omitted (\$255K and \$1 M
- Page after 2-29R is partially illegible. Explain entire contents. Also, what \$2.973 M for depreciation of capital equipment and if treated as a savings or cost, why??
- Is Navy using square footage of entire facility or on portion after BRAC 91
- What is left that's to be mothballed and used by visitors?
- As noted in DAD 04 follow-up by Don DeYoung, "future certifiability of the Annapolis facility must be maintained." "There are no other equivalent facilities in the western world that have the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures."
- Per page II-26, the number of contract Workyears should be 101, not 102. This is a mistake in the DoD report. How does this affect the COBRA, if at all? (DJD -06)
- U.K. has advised the US Navy that it "mothballed its facility and was planning to use Annapolis. II-29"
- Loss of facilities was reported as unacceptable several times in II- 25 through II-30
- How did BSAT and the COBRA cost out the cost of construction a new potable water treatment facility?
- What costs are associated with closing the fuel storage and refueling site for the YPC and where is that cost reflected??
- Do the price changes below include differences in price of fuel and are there any or is the amount of fuel negligible?
- II-34 and II-35 discuss difficulty in replacing magnetic fields laboratory. Cost of doing electromagnetic at any site other than Annapolis is \$20 M - where is this in the COBRA
- Does it make sense to do electro magnetic in Annapolis if White Oak is closed?
- Did Philadelphia correctly get points for piers and mobilization responsibilities or was this pre- continued shutdown?
- Part of savings may be excess people at Philadelphia being claimed as excess at Annapolis
- What are facilities like in Philadelphia -- need visit??

• p x-13

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DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

SUMMARY SHEET

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION DETACHMENT **ANNAPOLIS, MARYLAND**

INSTALLATION MISSION

Provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Some specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

- Surface, Undersea and USMC Vehicle Vulnerability and Survivability Systems.
- Surface and Undersea Vehicle Active and Passive Acoustic Signatures and Silencing Systems.
- Surface and Undersea Vehicle Non-Acoustic Signatures and Silencing Systems.
- Surface and Undersea Vehicle Propulsion Machinery Systems and Components.
- Surface and Undersea Vehicle Auxiliary Machinery Systems and Components.

The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis.
- Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing.
- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC.
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DOD JUSTIFICATION

- Sharp declines in technical center workload through 2001 which leads to excess capacity in these activities.
- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

Part III. (Cont'd)

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COST CONSIDERATIONS DEVELOPED BY DOD

- One-Time Cost: \$ 25.0 million
- Net Savings During Implementation: \$ 36.7 million
- Annual Recurring Savings: \$ 14.5 million
- Break-Even Year: 1 year
- Net Present Value Over 20 Years: \$ 175.1million

MANPOWER IMPLICATIONS OF THIS RECOMMENDATION (EXCLUDES CONTRACTORS)

	<u>Military</u>	<u>Civilian</u>	<u>Students</u>
Baseline	2	418	0
Reductions	1	138	0
Realignments	1	280	0
Total	2	418	0

MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)

Out		In		Net (Loss)	
<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>
2	520	0	0	(2)	(520)

ENVIRONMENTAL CONSIDERATIONS

- NSWC Philadelphia is in a non-attainment area for CO.
- NSWC Carderock and NRL are currently in moderate non-attainment for CO and attainment for PM-10.
- In the case of each receiving site, a conformity determination may be required to assess the impact of this action.
- No endangered species or biological habitat issues.
- No wetlands on the base.
- Historic preservation concerns apply.
- NSWC Annapolis is in severe ozone non-attainment area.
- There are asbestos problems of unknown magnitude on base.

REPRESENTATION

Governor: Parris Glendening
Senators: Paul Sarbanes
Barbara Mikulski
Representative: Wayne Gilchrest

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ECONOMIC IMPACT

- Potential Employment Loss: 1512 jobs (522 direct and 990 indirect)
- Annapolis, MD MSA Job Base: 2,434,000 jobs
- Percentage: .1 percent decrease
- Cumulative Economic Impact (year-year): 0.0 percent decrease

MILITARY ISSUES

- NSWC Philadelphia does not have facilities in any form for “Deep Ocean Machinery Simulation, Magnetic Fields, Submarine Fluid Dynamics, Electric Power, Electric Propulsion, and Machinery Acoustic Silencing.”
- This is the only location in the Western Hemisphere with the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures.
- NSWC closure would result in the loss of key technical personnel and the Navy’s laboratory capability to specify and validate cooling equipment which is responsive to the accelerated worldwide CFC production ban. Beginning in 1996, the Navy will be using a strategic stockpile of CFC, which will be depleted rapidly if ships cooling system developments permitting non-CFC refrigerants are delayed. Navy could be fined \$25,000 per day if the CFC replacement project is not completed on schedule. No other DoD or private sector facility has the capability to conduct this work.
- No other activity currently provides certain support for shipboard auxiliary machinery systems and “there is no single source that can provide the auxiliary machinery systems/components integration expertise and the critical facilities ... for 21st century ships and submarines.”
- “The Annapolis Site is the international leader in Machinery Silencing Technology. There is no other assembly of experienced technical experts and facilities capable of developing assessing the quietness of full-scale machinery at system operating conditions.”
- The Magnetic Fields Laboratory in Annapolis is “the only facility in the U.S. that can” support degaussing coil design and calibration procedures and the “loss of the Annapolis site would result in the severe degradation of the Navy’s capability and corporate memory in submarine electromagnetic silencing and surface ship EM signature exploratory development.”
- The United Kingdom has closed its facility and intends to use the facility at Annapolis.
- Annapolis has the capability to test manned vehicles under certified “man safe” conditions, without which at-sea testing would have to be conducted, with the inherent risks to human life due to potential failures. However, a manned vehicle was last tested in 1983.

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COMMUNITY CONCERNS/ISSUES

- Employees (particularly engineers) will be unable to obtain jobs in Annapolis if they choose not to move.
- COBRA assumptions regarding moving and availability of other Government jobs are unrealistic.
- There is sufficient space to enable tenant to move the remainder of its personnel on the compound and thus save several million dollars a year in rent.
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- Some of the savings are really excess people which will be "allocated from excess capacity at receiving sites."
- Compound is surrounded by Naval Station Annapolis and can not be used unless base is reconfigured.
- U.S. will suffer major loss of capability which will take years to replace.

ITEMS OF SPECIAL EMPHASIS

- NSWC Annapolis had a higher military value than NSWC Philadelphia and the margin would have been even greater had not Philadelphia gotten higher scores for quality of life, which is primarily oriented towards military personnel (Annapolis has one or two).
- BRAC-93 voted NOT against a DOD proposal which would have had Annapolis staffed primarily by an equipment maintenance detachment. Most personnel would move to Philadelphia and Carderock and would come to use the equipment on an as-needed basis.
- Costs associated with the DOD tenant at NSWC Annapolis may not have been properly accounted for.
- If NSWC is to be closed, why is the recommendation not to move it to DoD owned space which offers a synergy with the Joint Spectrum Center?
- When will Navy have environmental conformity determinations completed?
- Was everything possible done to maximize sharing of overhead between the Naval Station and the NSWC?
- What are the reuse plans for the facility?
- COBRA Standards are questionable, especially moving costs, % employees getting jobs, % moving to keep jobs.
- DOD for Base Operating Support Costs and Real Property Maintenance are suspect.
- Note that if Annapolis were kept open (once White Oak is closed) \$15-\$20 M could be saved by keeping Annapolis open.

David Epstein/Navy/08/09/95 2:32 PM

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1. Does BSAT use cost to train new employees?
2. Quality of life issues
3. What is increased cost of Base Operating Support if JSC moves onto base?
4. Why attempt to treat NSWC as a base -- it should be a tenant!!
5. BSAT said Navy R&D has to fall sharply. What action has the Navy taken to kill program offices in Crystal City? If nothing, what is the plan?
6. Since stated purpose of labs closing is to ensure that hardware systems commands have nowhere to spend money, will they then just turn to contractors?
7. Training Air Station deliberations decided that maintenance would only count about 4% of military value since most maintenance was contractor operated. Same logical argument carries over to military value proportion for quality of life at technical centers
8. BSEC for Technical Centers decided that Readiness was twice as important as facilities!!
9. Important decision at Sep 6 BSEC deliberations made weapons most important
10. BSEC decided Q of Life consistent across various categories, including Tech Centers at Sep 6 meeting
11. Oct 4 meeting documents Sep 22 meeting between Dalton and Deutch, in which former acknowledged excess capacity still existed in a variety of areas
12. Annapolis was compared with by BSEC Port Hueneme, Louisville, Carderock; Philadelphia was compared with Bayview, Yorktown, Sullivan, and NSWC HQ
13. BSEC told BSAT to give credit to activities who rely on a host activity for housing. Tenants should get credit for the host's quarters -- I think should have also examined Naval Academy in case of Annapolis
14. See Tab 38 12/12/94 para 10 for discussion of COBRA -- only considering ALT-1; four functions lost, seven moved; not to include JSC rent; BSEC approved BSAT exclusion of approximately \$30M in one-time unique moving costs for the seven facilities relocated in ALT-1; BSEC said not to include contract termination costs; BSEC directed that plant account for fuel station and water treatment be changed to Naval Station Annapolis
15. Only will consider scenario ALT1
- 16.

NSWC	NSWC
ANNAPOLIS	PHILADEL- PHIA

BSAT/BSEC SCORES
Deduct all Quality of Life
Points
Score without Q of Life

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INSTALLATION REVIEW

NAVAL SURFACE WARFARE CENTER - CARDEROCK DIVISION, ANNAPOLIS DETACHMENT, ANNAPOLIS, MD

Host: Naval Surface Warfare Center - Carderock, Detachment Annapolis

Major Tenant: Joint Spectrum Center; performs highly classified work; reports to Defense Information Systems Agency; 134 employees work on NSWC compound.

Location: Across Severn River from Naval Academy; 1 mile from downtown Annapolis
Surrounded by Naval Station Annapolis on land side and by Severn River.

Key Facilities:

- **Non-CFC Elimination**
- **Deep Ocean Vehicle Facility**
- **Propulsion Shaftline Facility**
- **Machinery Acoustic Silencing**
- **Submarine Fluid Dynamics**
- **Magnetic Fields Laboratory**
- **Advanced Electrical Machinery**

Manpower:

- 19 civilian personnel and one officer are due to relocate to NSWC Carderock at Carderock, MD and 261 civilian personnel are to relocate to Philadelphia.
- 138 civilian personnel and one officer will become excess.

Crucial issues and questions which should be discussed:

1. Relative to each major system on the basis.
 - Where else can testing be done if we close NSWC-Annapolis?
 - What is impact if we close down and then attempt to reopen - will equipment be damaged?
 - Are the project managers you support on this suite of equipment comfortable with Navy decision to close NSWC and eliminate opportunity to do testing here?
2. Besides the Navy, are there any US or foreign organizations who test or expect to test at NSWC Annapolis? Any private companies?

3. What has been happening to your workload over the past few years? Do you currently have enough work for your people? Do you expect to have enough in the future?

4. I'm concerned about various aspects of the cost analysis:

- Are the jobs to be eliminated really excess at Annapolis or does the excess exist elsewhere?
- Has Annapolis's overhead been reduced or is it scheduled to be reduced in conjunction with BRAC-91 adjustments?
- Explain the relationship and plans for your tenant, the Joint Spectrum Center. How much would be spent on rent if the JSC moved off the compound? Is there room for more JSC personnel to move onto the compound? How much money would that save?

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Naval Surface Warfare Center, Carderock Division, Annapolis Detachment

COMMUNITY CONCERNS

The community expressed concern over the Navy's cost analysis of the proposed move. Examples of their concerns included mistakes (acknowledged by the Navy) in documenting real property maintenance and Base Operating Support costs; in estimating costs of moving facilities to Philadelphia; in reflecting the cost of functions which must continue to be performed; in estimating costs of moving or maintaining a DoD tenant of NSWC in a different location; in recognizing costs associated with the loss of skilled staff.

The Navy proposed the elimination of two major systems which, according to the Community, would result in extensive live testing at greatly increased costs. The community pointed out that there were no other facilities in the Western hemisphere on which such testing could be conducted. Without these two facilities, some testing could not even be undertaken because it would be too dangerous in a live environment. They pointed out that, in addition to the inability to conduct certain types of testing, other vital projects would be delayed, perhaps to unacceptable levels. The community pointed out that due to project delays associated with the move, several vital systems might not be available for installation on the lead ships in their respective classes. More serious was a potential delay in the CFC replacement program. This program was necessitated by an international treaty signed by the United States which agreed to the elimination of CFCs by 1998. The community stated and Navy officials confirmed that the move might jeopardize timely completion of the project, which could result in fines of \$25 K per day and or affect ship movements.

The community reminded us, as noted in the official briefings, that NSWC Annapolis is surrounded by water and Naval Station Annapolis. This meant many overhead costs would remain and that reuse of the land was highly problematic.

The community pointed out the significant differences between the employee populations at the two commands. They stressed the large differences in terms of research work being done, patents received, educational levels achieved. They suggested the number of positions which Navy said could be eliminated was questionable and that the COBRA scenario stated personnel conducting CFC work would not be moved to Philadelphia.

The Dean of the Naval Academy came to NSWC to explain the value to USNA of the proximity of the Laboratory. He explained how faculty members were able to pursue projects during the academic year, and during the summer as an income supplement. He pointed out that Midshipman studying engineering obtained exposure to real-life problems, and that several of those top-performers were able to spend a semester pursuing independent engineering projects.

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- Cost of moving (equipment and personnel) was substantially understated
- Cost of five personnel responsible for operating fuel and water treatment plants was omitted
- Cost of staff supporting CFC facility was omitted
- Military value of Annapolis was understated
- Interruption to CFC program
- Impact of loss of Deep Pressure Tank
- Impact of loss of Fluid Dynamics Facility
- BSAT did not properly input RPMA and BOS costs
- Moving Joint Spectrum Center off base causes DoD to spend more money on rent than BSAT assumptions would indicate
- Moving Joint Spectrum Center's contractor, which employs about 600 employees and currently occupies leased space in Annapolis, onto the base costs far less money than is currently paid for rent and related costs
- Closing NSWC Annapolis does not result in the closure of any facilities, because NSWC Annapolis is surrounded by Naval Station Annapolis
- Large numbers of engineers will not move to Philadelphia
- Move to Philadelphia will result in the need to provide substantial training for NSWC Philadelphia employees (existing employees and new hires); this costs money for training and makes the employees unavailable for normal workload
- NSWC Philadelphia's employees are generally less well educated than are those of NSWC Annapolis
- Synergy with the Naval Academy will be lost -- synergy benefits Navy, Naval Academy, and NSWC

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Naval Surface Warfare Center, Carderock Division, Annapolis Detachment

COMMUNITY CONCERNS

The community expressed concern and believe the Navy underestimated costs related to base overhead, facility moving, alternative testing procedures, tenant relocation and loss of skilled staff. The community believes that the proposal would eliminate two major test facilities and would require the substitution of extensive live testing at greatly increased costs or risk to personnel. They pointed out that other vital projects would be delayed, perhaps unacceptably. An example the community identified, is a delay in testing systems which may not be available for installation on the lead ships in their respective classes. More serious was a potential delay in the chlorofluorocarbon (CFC) replacement program. The Clean Air Act and an international treaty, the Montreal Protocol, halt all U. S. production of CFCs and production of products used by the Navy has already ceased.. The community also noted that NSWC Annapolis is surrounded by Naval Station Annapolis, which is not closing, and water. Thus overhead costs would remain and reuse of the land would be highly problematic.

The community expressed concerns about the movement of much of their R&D mission to NSWC Philadelphia which has in-service engineering, not research, as its primary function. They pointed out significant differences between research experience and educational levels of the employee populations at the two commands. They suggested that the number of positions the Navy said could be eliminated was questionable and that the scenario eliminated, instead of relocating, some critical personnel, such as those conducting CFC work.

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DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

SUMMARY SHEET

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MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)

<u>Out</u>		<u>In</u>		<u>Net (Loss)</u>	
<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>
2	520	0	0	(2)	(520)

ENVIRONMENTAL CONSIDERATIONS

- NSWC Philadelphia is in a non-attainment area for CO.
- NSWC Carderock and NRL are currently in moderate non-attainment for CO and attainment for PM-10.
- In the case of each receiving site, a conformity determination may be required to assess the impact of this action.
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- This is the only location in the Western Hemisphere with the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures.
- NSWC closure would result in the loss of key technical personnel and the Navy’s laboratory capability to specify and validate cooling equipment which is responsive to the accelerated worldwide CFC production ban. Beginning in 1995, the Navy will be using a strategic stockpile of CFC, which will be depleted rapidly if ships cooling system developments permitting non-CFC refrigerants are delayed. Navy could be fined \$25,000 per day if the CFC replacement project is not completed on schedule. No other DoD or private sector facility has the capability to conduct this work.
- No other activity currently provides certain support for shipboard auxiliary machinery systems and “there is no single source that can provide the auxiliary machinery systems/components integration expertise and the critical facilities ... for 21st century ships and submarines.”
- “The Annapolis Site is the international leader in Machinery Silencing Technology. There is no other assembly of experienced technical experts and facilities capable of developing assessing the quietness of full-scale machinery at system operating conditions.”
- The Magnetic Fields Laboratory in Annapolis is “the only facility in the U.S. that can” support degaussing coil design and calibration procedures and the “loss of the Annapolis site would result in the severe degradation of the Navy’s capability and corporate memory in submarine electromagnetic silencing and surface ship EM signature exploratory development.”
- The United Kingdom has closed its facility and intends to use the facility at Annapolis.
- Annapolis has the capability to test manned vehicles under certified “man safe” conditions, without which at-sea testing would have to be conducted, with the inherent risks to human life due to potential failures. However, a manned vehicle was last tested in 1983.

DRAFT

COMMUNITY CONCERNS/ISSUES

- Employees (particularly engineers) will be unable to obtain jobs in Annapolis if they choose not to move.
- COBRA assumptions regarding moving and availability of other Government jobs are unrealistic.
- There is sufficient space to enable tenant to move the remainder of its personnel on the compound and thus save several million dollars a year in rent.
- COBRA data reflects NSWC as it is today, not as dictated by BRAC 91. This makes the recurring savings appear much larger than it really is.
- COBRA data does not reflect the annual rent which would be incurred (\$1 million/year) if current tenant were forced to move into leased spaces.
- Some of the savings are really excess people which will be "allocated from excess capacity at receiving sites."
- Compound is surrounded by Naval Station Annapolis and can not be used unless base is reconfigured.
- U.S. will suffer major loss of capability which will take years to replace.

ITEMS OF SPECIAL EMPHASIS

- NSWC Annapolis had a higher military value than NSWC Philadelphia and the margin would have been even greater had not Philadelphia gotten higher scores for quality of life, which is primarily oriented towards military personnel (Annapolis has one or two).
- BRAC-93 voted NOT against a DOD proposal which would have had Annapolis staffed primarily by an equipment maintenance detachment. Most personnel would move to Philadelphia and Carderock and would come to use the equipment on an as-needed basis.
- Costs associated with the DOD tenant at NSWC Annapolis may not have been properly accounted for.
- If NSWC is to be closed, why is the recommendation not to move it to DoD owned space which offers a synergy with the Joint Spectrum Center?
- When will Navy have environmental conformity determinations completed?
- Was everything possible done to maximize sharing of overhead between the Naval Station and the NSWC?
- What are the reuse plans for the facility?
- COBRA Standards are questionable, especially moving costs, % employees getting jobs, % moving to keep jobs.
- DOD for Base Operating Support Costs and Real Property Maintenance are suspect.
- Note that if Annapolis were kept open (once White Oak is closed) \$15-\$20 M could be saved by keeping Annapolis open.

David Epstein/Navy/04/25/95 9:11 AM

1995 DoD Recommendations and Justifications

Naval Surface Warfare Center, Carderock Division Detachment, Annapolis, Maryland

Recommendation: Close the Naval Surface Warfare Center, Carderock Division Detachment, Annapolis, Maryland, including the NIKE Site, Bayhead Road, Annapolis, except transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing. Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily Naval Surface Warfare Center, Carderock Division Detachment, Philadelphia, Pennsylvania; Naval Surface Weapons Center, Carderock Division, Carderock, Maryland; and the Naval Research Laboratory, Washington, D.C. The Joint Spectrum Center, a DoD cross-service tenant, will be relocated with other components of the Center in the local area as appropriate.

Justification: There is an overall reduction in operational forces and a sharp decline of the Department of the Navy budget through 2001. Specific reductions for technical centers are difficult to determine because these activities are supported through customer orders. However, the level of forces and the budget are reliable indicators of sharp declines in technical center workload through 2001, which leads to a recognition of excess capacity in these activities. This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable. The total closure of this technical center reduces overall excess capacity in this category of installations, as well as excess capacity specific to this particular installation. It results in synergistic efficiencies by eliminating a major site and collocating technical personnel at the two primary remaining sites involved in hull, machinery, and equipment associated with naval vessels. It allows the movement of work to other Navy, DoD, academic and private industry facilities, and the excessing of some facilities not in continuous use. It also collocates RDT&E efforts with the In-Service Engineering work and facilities, to incorporate lessons learned from fleet operations and to increase the technical response pool to solve immediate problems.

Return on Investment: The total estimated one-time cost to implement this recommendation is \$25 million. The net of all costs and savings during the implementation period is a savings of \$36.7 million. Annual recurring savings after implementation are \$14.5 million with a return on investment expected in one year. The net present value of the costs and savings over 20 years is a savings of \$175.1 million.

Impacts:

Economic Impact on Communities: Assuming no economic recovery, this recommendation could result in a maximum potential reduction of 1,512 jobs (522 direct jobs and 990 indirect jobs) over the 1996-to-2001 period in the Baltimore, Maryland PMSA economic area, which is 0.1 percent of economic area employment. The cumulative economic impact of all BRAC 95 recommendations and all prior-round BRAC actions in the economic area over the 1994-to-2001 period could result in a maximum potential decrease equal to less than 0.1 percent of employment in the economic area.

1995 DoD Recommendations and Justifications

Community Infrastructure Impact: There is no known community infrastructure impact at any receiving installation.

Environmental Impact: The closure of NSWC Annapolis does not involve the transfer of any industrial-type activities. NSWC Carderock and NRL are currently in moderate non-attainment for carbon monoxide and attainment for PM-10; however, the movement of personnel into those areas will not adversely impact the environment in those areas. NSWC Philadelphia is in a non-attainment area for carbon monoxide. In the case of each receiving site, a conformity determination may be required to assess the impact of this action. At all receiving sites, the utility infrastructure is adequate to handle the additional personnel. Also, there is no adverse impact on threatened/endangered species, sensitive habitats and wetlands, cultural/historical resources as a result of this recommendation.

BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

27 MARCH 1995

LEAD COMMISSIONER:

Commissioner Rebecca Cox

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Lyles
Mr. Alex Yellin
Mr. David Epstein

LIST OF ATTENDEES:

Senator Paul Sarbanes
Senator Barbara Mikulski
Representative Wayne Gilchrest
Representative Steny Hoyer
Governor Parris Glendening
Rear Admiral David Sargeant, Jr. (USN) (Commander, NSWC);
Captain James Baskerville (USN) (Commander, NSWC, Carderock Division)
Commander Roger Walker (USN) (Officer-in-Charge, NSWC, Carderock Division, Annapolis Detachment)
Colonel George "Ron" Flock (USAF), Commander, Joint Spectrum Center
Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate
CAPT Robin Bosworth (Ret.) - prior Officer-in-Charge NSWC Annapolis

BASE'S PRESENT MISSION: is to provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

- Surface, Undersea and USMC Vehicle Vulnerability and Survivability Systems
- Surface and Undersea Vehicle Active and Passive Acoustic Signatures and Silencing Systems
- Surface and Undersea Vehicle Non-Acoustic Signatures and Silencing Systems
- Surface and Undersea Vehicle Propulsion Machinery Systems and Components
- Surface and Undersea Vehicle Auxiliary Machinery Systems and Components

The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis
- Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing
- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DOD JUSTIFICATION:

- Sharp declines in technical center workload through 2001 which leads to excess capacity in these activities.
- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

MAIN FACILITIES REVIEWED:

- Visit began with a 15 minute overview in the Melville Room of the Headquarters Building.
- Two hour tour of the base, including the Non-CFC Elimination lab, the Deep Ocean Vehicle Facility, the Propulsion Shaftline Facility, the Electrical Power Technology laboratory, the Machinery Acoustic Silencing lab, the Fluid Dynamics facility, the Magnetic Field Lab, the Pulse Power Systems complex, and the Advanced Electrical Machinery facility.
- Dean Shapiro of the United States Naval Academy discussed the benefits to the Academy its faculty and the Midshipmen who work on projects at NSWC Annapolis.
- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 25 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

- The professional staff at the installation indicated that they are unlikely to move to Philadelphia. This, along with the difficulty of moving sensitive equipment, could result in the substantial delay of ongoing projects. Several major projects, particularly the one to develop equipment to handle CFCs might be adversely impacted. This would jeopardize international treaties and could be extremely expensive. In the case of other projects, there is the possibility that lead ships in some classes might be built without the enhanced systems being developed at Annapolis. Those systems might be later retrofitted at additional cost.
- It will be difficult if not impossible to move some of the equipment at Annapolis. The Deep Ocean Vehicle Facility would simply be abandoned. This could result in costly testing at sea with less reliability. Concern was also expressed over the magnetic, noise, and vibration at NSWC Philadelphia, particularly because of the industrial nature of the shipyard complex and proximity to the major interstate highway and airport.
- Costs for a tenant, the Joint Spectrum Center (JSC), a Defense Information Systems Agency (DISA) activity could increase by one million dollars per year if they have to move into commercial space. These costs were not considered. The JSC supporting contractor, the Illinois Institute of Technology Research Institute, is currently paying \$1.5 M per year to rent commercial space in Annapolis which is reimbursed by JSC. There would be sufficient space (after the departure of Materials Department Staff to Carderock, per BRAC '91) at NSWC to house all of the JSC staff including some currently in Washington, as well as IITRI. Cost of renovating base facilities and adequacy of space at NSWC Annapolis for JSC are being examined. If Annapolis were to close, JSC could move to Fort Meade, to leased space in Annapolis, or elsewhere.
- Dean Shapiro of the Naval Academy pointed out that the loss of NSWC would result in greatly diminished opportunities for Naval Academy midshipmen, particularly engineering majors, to gain exposure to practical engineering and R&D work. Faculty members would also lose opportunities to get good summer projects.

COMMUNITY CONCERNS RAISED:

- Navy claims on savings were disputed.
- Programs will be disrupted.
- Key people will be lost and a winning team will be broken up.
- Synergy with Naval Academy will be lost.
- There will be no benefit from sale of or reuse of land, since NSWC is surrounded by Naval Station Annapolis.
- Philadelphia and Carderock do not have the magnetic, sound, and vibration free environments to conduct testing.
- Lives of employees will be disrupted.
- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Commissioner Cox requested that Mr. Epstein

- Investigate various aspects of the DoD claimed savings.
- Obtain information on the 78 major capabilities of the NSWC community, with particular emphasis on the statement that NSWC Annapolis has primary responsibility for 3 of the top 10 items on that list.

BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

1 MAY 1995

LEAD COMMISSIONER:

Commissioner Benjamin Montoya

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Epstein

LIST OF ATTENDEES:

Senator Paul Sarbanes
Dr. Ira Blatstein, Technical Director, Naval Surface Warfare Center
Dean Shapiro, United States Naval Academy
CAPT James Baskerville (USN), Commander, NSWC, Carderock Division
Dr. Richard Metrey, Director, Carderock Division
Dr. William Middleton, Chief of Staff, Carderock Division
CDR Roger Walker (USN), Officer-in-Charge, NSWC, Carderock Division, Annapolis Det.
COL George "Ron" Flock (USAF), Commander, Joint Spectrum Center
Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate
Mr. James Corder (retired) - previous Deputy Director, Machinery R&D Directorate

BASE'S PRESENT MISSION: is to provide research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle, hull, mechanical and electrical systems, and propulsors; provide logistics R&D; and provide support to the Maritime Administration and the maritime industry. Specific efforts supported include RDT&E, Acquisition, and In-Service Engineering of

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- Surface and Undersea Vehicle Non-Acoustic Signatures and Silencing Systems
- Surface and Undersea Vehicle Propulsion Machinery Systems and Components
- Surface and Undersea Vehicle Auxiliary Machinery Systems and Components

The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis
- Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing
- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DOD JUSTIFICATION:

- Sharp declines in technical center workload through 2001 which leads to excess capacity in these activities.
- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

MAIN FACILITIES REVIEWED:

- Visit began with a 30 minute overview, during a working lunch, in the Melville Room of the Headquarters Building.
- 90 minute tour of the base including the Non-CFC Elimination lab, the Deep Ocean Vehicle Facility, the Propulsion Shaftline Facility, the Electrical Power Technology laboratory, the Machinery Acoustic Silencing lab, the Fluid Dynamics facility, the Magnetic Field Lab, the Pulse Power Systems complex, and the Advanced Electrical Machinery facility.
- Dean Shapiro of the United States Naval Academy discussed the benefits to the Academy its faculty and the Midshipmen who work on projects at NSWC Annapolis.
- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 10 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

In addition to the issues identified during the visit by Commissioner Cox, the issues listed below were identified. A copy of the write-up of Commissioner Cox's visit was provided to Commissioner Montoya.

- It may be more difficult to hire top quality engineers in Philadelphia. In response to questions posed by Commissioner Montoya and Mr. Epstein, CAPT Baskerville and COL Flock acknowledged that their presence in the Annapolis area, with its high quality of life, facilitated personnel retention, even when higher paying jobs were offered.
- The sequence in which the Commissioners vote on NSWC Annapolis and White Oak could be important because if they close the first one, then when they vote on whichever of these is voted on last, the Commissioners will be told there is an additional cost of \$15-\$17 M cost associated with closing this last site. This sum represents the estimated cost of building a new electromagnetic free research facility at NSWC Carderock or some other location.
- The recommendation to close the deep pressure activity appears to have originated from the BSEC or BSAT.
- Despite earlier indications to the contrary, NSWC Philadelphia can accommodate the Annapolis facilities scheduled to be relocated while still keeping the facilities within an area which approximates that of a destroyer.
- The COBRA contains some standard moving costs, rather than the costs of moving equipment as specified in the NSWC data call. Related MILCON costs were also omitted from the COBRA.
- The COBRA does not reflect any costs for training, but this was consistent with Navy's general policy.
- In order to enable labs such as Annapolis and Carderock to remain viable in a time of decreasing budgets, the labs must be allowed to compete for some private sector work and to hire new engineers.
- The Deep Ocean Vehicle Facility could be moved, by barge, to NSWC Philadelphia for about \$15 M.

COMMUNITY CONCERNS RAISED:

- Navy claims on savings were disputed.
- Programs will be disrupted.
- Key people will be lost and a winning team will be broken up.
- Synergy with Naval Academy will be lost.
- There will be no benefit from sale of or reuse of land, since NSWC is surrounded by Naval Station Annapolis.
- Philadelphia and Carderock do not have the magnetic, sound, and vibration free environments to conduct testing.
- Lives of employees will be disrupted.
- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

REQUESTS FOR STAFF AS A RESULT OF VISIT:

Commissioner Montoya requested that NSWC Carderock division provide details regarding the loss of the Deep Pressure Tank and the Fluid Dynamics Facility. He expressed interest in the cost and the impact on the programs that would have used those facilities if they were available.

BASE VISIT REPORT

NAVAL SURFACE WARFARE CENTER (NSWC), CARDEROCK DIVISION, DETACHMENT ANNAPOLIS, MARYLAND

19 MAY 1995

LEAD COMMISSIONER:

Commissioner Al Cornella

ACCOMPANYING COMMISSIONER:

None

COMMISSION STAFF:

Mr. David Epstein

LIST OF ATTENDEES:

CAPT James Baskerville (USN), Commander, NSWC, Carderock Division
Dr. William Middleton, Chief of Staff, Carderock Division
CDR Roger Walker (USN), Officer-in-Charge, NSWC, Carderock Division, Annapolis Det.
COL George "Ron" Flock (USAF), Commander, Joint Spectrum Center
Mr. Larry Argiro (retired) - previous Director, Machinery R&D Directorate
Mr. James Corder (retired) - previous Deputy Director, Machinery R&D Directorate

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The Annapolis Detachment has some unique missions involving ship vulnerability and survivability, ship active and passive signatures, and surface and undersea vehicle hull machinery, propulsors and equipment.

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis
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- Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

DOD JUSTIFICATION:

- Sharp declines in technical center workload through 2001 which leads to excess capacity in these activities.
- This excess and the imbalance in force and resource levels dictate closure/realignment or consolidation of activities wherever practicable.
- This action permits the elimination of the command and support structure of the closing activity resulting in improved efficiency, reduced costs, and reduced excess capacity.

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- Colonel Flock, USAF, described the mission and requirements of the Joint Spectrum Center, which was recently transferred from Air Force to Defense Information Systems Agency and his interest in consolidating his personnel
- Mr. Tim Doyle lead a 10 minute wrap-up and answered questions.

KEY ISSUES IDENTIFIED:

In addition to the issues identified during the visit by Commissioner Cox, the issues listed below were identified. A copy of the write-up of the visits by Commissioners Cox and Montoya were provided to Commissioner Cornella.

- It may be more difficult to hire top quality engineers in Philadelphia. In response to questions posed by Commissioner Cornella and Mr. Epstein, CAPT Baskerville and COL Flock acknowledged that their presence in the Annapolis area, with its high quality of life, facilitated personnel retention, even when higher paying jobs were offered.
- The sequence in which the Commissioners vote on NSWC Annapolis and White Oak could be important because if they close the first one, then when they vote on whichever of these is voted on last, the Commissioners will be told there is an additional cost of \$15-\$17 M cost associated with closing this last site. This sum represents the estimated cost of building a new electromagnetic free research facility at NSWC Carderock or some other location.
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- The COBRA does not reflect any costs for training, but this was consistent with Navy's general policy.
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- Programs will be disrupted.
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- There will be no benefit from sale of or reuse of land, since NSWC is surrounded by Naval Station Annapolis.
- Philadelphia and Carderock do not have the magnetic, sound, and vibration free environments to conduct testing.
- Lives of employees will be disrupted.
- As the U.S. downsizes its military, it is even more important that high tech superiority be maintained.

Document Separator

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

L. R. Walker; Commander, USN
NAME (Please type or print)

LR Walker
Signature

Officer-in-Charge
Title

27 January 1995
Date

Naval Surface Warfare Center, Carderock
Division Detachment, Annapolis
Activity

This certification covers the NSWC/Carderock Division/Annapolis Detachment Response to the BRAC Scenario 3-20-0198-035A.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

James E. Baskerville; Captain USN
NAME (Please type or print)

[Signature]
Signature

Commander
Title

27 January 1995
Date

Carderock Division, NSWC
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM D. P. SARGENT, JR.
NAME (Please type or print)

[Signature]
Signature

COMMANDER
Title

27 January 1995
Date

NAVAL SURFACE WARFARE CENTER
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

NAME (Please type or print)

[Signature]
Signature

G. R. STERNER
Commander
Title
Naval Sea Systems Command

1-31-95
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print)

[Signature]
Signature

Title

2/17/95
Date

Activity

This certification covers the NSWC/Carderock Division/Annapolis Detachment Response to the BRAC Scenario 3-20-0198-035A.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
ENCLOSURE (1) - SCENARIO SUMMARY

Complete one copy of Enclosure (1) - Scenario Summary for the entire closure/realignment scenario. Tables included in this enclosure are 1-A, 1-B and 1-C.

Table 1-A: Scenario Description. Identify the Scenario Number, Title and Response Date. The Scenario Number and Title will be provided to you by the BSAT as part of the data call tasking.

Scenario No.:	3-20-0198-035A
Scenario Title:	NSWC Annapolis
Date:	1600 EST, 22 December 1994

DESCRIPTION OF THE PROPOSED ALTERNATIVE SCENARIO:

"Close NSWC Det Annapolis and Special Areas (Nike Site). Consolidate the majority of the Machinery R&D functions at NSWC-Philadelphia and at other NSWC Carderock sites as appropriate. Relocate/Replicate, as fiscally prudent and appropriate, those specialized capabilities and facilities now only available at NSWC Annapolis."

IMPACT STATEMENT:

The scenario 3-20-0198-035 as presented by the BSAT is impractical to implement. As per the BRAC 95 instructions, the NAVSEASYSCOM is providing a recommended alternative which still closes NSWC Det Annapolis, but is significantly different from the "baseline scenario". The "baseline scenario" creates significant eliminations in overall US Navy critical capabilities (i.e. vertical mission reductions). This scenario relocates seven facilities from Annapolis (see pages 7 and 8) which were not relocated in the baseline scenario 3-20-0198-35 and therefore retains many of the Mission Essential Machinery RDT&E capabilities within the U.S. Navy Force Structure while reducing overall Navy Infrastructure costs. The alternative scenario however, does result in some lost capabilities and will adversely impact the ability of the U.S. Navy to meet selected requirements.

Scenario 3-20-0198-035A, as in Scenario 3-20-0198-035, provides for the closure of "...special areas (NIKE Site)." The Intermediate Fire Research equipment will relocate from the Nike site, without the personnel, to NRL Chesapeake Beach Detachment. The Sea Survival/Life Saving Sysyems will be moved to the NSWC Philadelphia site, and the remaining

\$ 7M ?

Materials Research test facilities (functionally realigned under BRAC 91 to the NSWC Carderock site) will be moved to the Carderock site.

A. Annapolis Site Closure Impact Assessment:

Facilities at NSWC Annapolis Site have been developed to serve unique aspects of Research and Development. In particular, these facilities are capable of controlling machinery operating parameters independently and maintaining them over extended periods of time, as well as varying them over the entire range. These characteristics are not available in the majority of In-Service Engineering (ISE) facilities at NSWC Philadelphia. In many cases they cannot be obtained through augmentation, but are essential to the R&D function of defining the performance of developmental equipment and verifying analytical models. Examples where Philadelphia assets are adequate include Compressed Air, Shock and Vibration, and Diesel Engine Facilities. In contrast, facilities where augmentation would be costly and impractical include Propulsion Line Shaft, Auxiliary Machinery, and Environmental Non-CFC. Facilities that do not exist in any form include Deep Ocean Machinery Simulation, Magnetic Fields, Submarine Fluid Dynamics, Electric Power, Electric Propulsion, and Machinery Acoustic Silencing.

In this alternative scenario the closure of the Annapolis Site with the migration of selected critical staff and mission essential R&D facilities provides for the continuance of the majority of the Navy's capabilities to transform machinery requirements into technical and procurement specifications (military and commercial), the development of specialized certification criteria and associated validation of system designs, and the ability to provide acceptance testing of specialized or "one of a kind" full-scale machinery systems. Currently, the Annapolis based Machinery R&D Directorate supports and complements the hull focused functions at the NSWC Carderock Site as well as the ISE functions at the NSWC Philadelphia Site by providing an organic linkage of S&T capabilities with the machinery development, acquisition, and operational problem resolution processes.

this doesn't address loss of equip

This alternative scenario also provides for the migration of 280 technical operations personnel with their primary Machinery R&D tools. An additional 28 positions will be allocated from excess capacity at receiving sites.

This scenario also eliminates some critical Machinery R&D capabilities through the loss of 94 personnel and their RDT&E facilities and/or equipments.

Selected capabilities in Machinery R&D retained in this alternative scenario are defined below:

- * The R&D scientists and engineers remain connected with their special facilities retaining the ability to integrate the ship systems technologies and components to meet USN

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performance, stealth, and affordability goals, especially in auxiliary and electrical areas characterized by diverse and often competing functions and multiple equipment suppliers, many of which are small with minimal laboratory capability and largely non-DoD business base.

- * The continued availability of essential R&D facilities sustains the Navy's ability to cost effectively explore, specify, validate , and introduce new machinery into advanced submarines and surface ships as well as advanced surface machinery programs and autonomic ship initiatives. Some of the more significant facility capability consolidations and/or replications include:

- NSWC Philadelphia Site:
 - Replication of the only full scale submarine shaftline facilities capable of performing USN required qualification and SUBSAFE certification of thrust bearings, vibration reducers, and propulsion and emergency shaft seals. These facilities are also used in the development and validation of active shaftline vibration control systems.
 - Replication and integration of the NSWC Annapolis Site electric drive and pulse power facilities laboratories into the existing NSWC-Philadelphia capabilities will reduce risks in the development of affordable propulsion and propulsion derived power for strike and self-defense weapons (e.g. the electric gun).
 - Replication and integration of electrical power and auxiliary laboratories which are required for the development of damage tolerant integrated systems and which reduce manning levels, crew skill requirements, and acquisition/support costs.
 - The augmentation and replication of the special machinery acoustic silencing facilities at the NSWC Philadelphia Site for reducing ship and submarine vulnerability to acoustic detection and ordnance.
- NSWC Carderock Division (White Oak Site).^{1,2,3,4} The replication of the truly unique full scale machinery magnetic signature measurement facility which is used to minimize ship and submarine vulnerability to magnetic detection and ordnance. It should be noted, that if the White Oak site is to be closed, due to the one-of-a kind characteristics of the Magnetic Fields Measurement Facility, a replication of this capability will have to be accommodated elsewhere.

¹See Attachment II, DJD 08, Questions 1a, b, c, 2.

²See Attachment II, DJD 010, Questions 3, 4.

³See Attachment II, DJD 025, Question 1.

⁴See Attachment II, DJD 026, Questions 1, 2.

Along with the loss of Annapolis technical personnel, the below capability losses will be incurred:

- * The ability to conduct land based high pressure acoustic measurements^{1,2,3,4} of submarine ballasting and related piping systems.
- * The laboratory capability to identify, assess, specify, validate, and direct development of technologies in the areas of cryogenics,⁵ superconductivity, and power semiconductors.
- * The Navy's laboratory capability to specify and validate combat system and crew cooling equipment which is responsive to the accelerated worldwide CFC production ban. Beginning in 1996, the Navy will be using a strategic stockpile of CFC, which will be depleted rapidly if ships cooling system developments permitting non-CFC^{6,7,8,9,10,11,12} refrigerants are delayed or terminated.

¹See Attachment II, DJD 07, Question 2.

²See Attachment II, DJD 014, Question 1.

³See Attachment II, DJD 015, Question 2.

⁴See Attachment II, DJD 016, Question 1.

⁵See Attachment II, DJD 014, Question 2.

⁶See Attachment II, DJD 08, Questions 4a, b.

⁷See Attachment II, DJD 014, Question 3.

⁸See Attachment II, DJD 016, Question 2.

⁹See Attachment II, DJD 017, Question 1.

¹⁰See Attachment II, DJD 021, Questions 1, 2.

¹¹See Attachment II, DJD 023, Questions 1, 2, 3, 4.

¹²See Attachment II, DJD 024, Question 1.

- * The loss of near-term availability of the Deep Ocean Vehicle Simulation Facility^{1,2,3,4} (as a result of it being moth balled) to validate the performance and safety of operating machinery and small manned submersibles.

"Moth balling" is defined herein as the status between the NAVFAC P-164 (Detailed Inventory of Naval Shore Facilities) terms of "standby" and "abandon", i.e. "reserve"⁵ status.

In addition to the technical issues on the closure of the NSWC Annapolis Detachment, the non-technical impacts include:⁶

- * The elimination of the potable water^{7,8} supply for the North Severn Navy housing for the Annapolis Naval Station
- * The relocation of the tenancy of the Joint Spectrum Center Headquarters^{9,10} (a non-DoN Command with the Air Force serving as the Executive Agent for the Joint Chiefs of Staff, until FY96 when DISA becomes the Executive Agent)
- * The elimination of a long term synergistic relationship with the U.S. Naval Academy faculty and midshipmen.
- * The elimination of the fuel storage and refueling¹¹ site for the Naval Academy's Yard Patrol craft.

B. Special Site (NIKE Site) Closure Impact Assessment:

The closure of the Special Area (NIKE Site) has little relationship to the first portion

¹See Attachment II, DJD 04, Questions 1, 2, 3, 4, 5.

²See Attachment II, DJD 07, Question 1.

³See Attachment II, DJD 011, Question 3.

⁴See Attachment II, DJD 015, Questions 1a, b.

⁵See Attachment II, DJD 04, Question 3.

⁶See Attachment II, DJD 010, Questions 1, 2.

⁷See Attachment II, DJD 07, Question 3a.

⁸See Attachment II, DJD 011, Question 2.

⁹See Attachment II, DJD 02, Question 2.

¹⁰See Attachment II, DJD 04, Question 6.

¹¹See Attachment II, DJD 07, Questions 3b, c.

of this scenario. The BRAC 91 actions provided for the migration of the functional responsibilities for the majority of the facilities residing at this special site to the NSWC Carderock Site, i.e., the migration of the Materials R&D functions. The personnel located at the site and the supporting scientists and engineers are all included in the Carderock Site manning, per the BRAC 91 actions and the BRAC 95 guidance.

The specialty facilities located at the Special Site (NIKE Site) that do not have any industrial or other US Navy counterparts include:

- * Thermal Spray for machinery element restoration, which is used for the development and modification of processes, procedures, and materials for reducing Fleet maintenance costs and increasing Fleet readiness through lower maintenance and down-times on machinery related systems.
- * Polyurethane processing for the prototyping and producibility of unusual and complex compounds and/or fixtures.
- * Reactive Metal Spray Forming, which is used to utilize less expensive titanium and other metal alloys for near net shape machinery components.

Due to the non-availability of equivalent facilities and the BRAC 91 directed actions, this scenario requires these capabilities be reconstituted at Carderock. Other identified required facility realignments include:

- * Sea Survival / Life Saving Systems - exist to investigate, identify, and correct the causes of product failures and poor operational performance in the area of sea safety equipment. Organized in direct response to requests from NAVSEA in order to curb sea safety equipment problems, the group works closely with materials engineers, as well as the FBI and Navy investigators, to ensure that sea safety equipment will function properly and effectively when it is needed.
- * Intermediate Scale Fire Testing^{1,2} - established in 1983 by the CNO Executive Board to conduct small & intermediate scale fire research in order to save lives and reduce the damage caused by fire. Fire is as prevalent during peacetime as it is during war. Passive fire safety, preventing the start and spread of the fire, is a prime concern of this group. The synergy between their work and the progress of material technology greatly assists their progress. As organic composite materials are introduced aboard ships and submarines, the resistance to and performance in fire conditions is a key factor in the suitability decisions regarding the use of these materials.

The Sea Survival/Life Saving Systems will be moved to the NSWC Philadelphia site and the Intermediate Scale Fire Testing, without the personnel, will be moved to the NRL Chesapeake Bay facility.

¹See Attachment II, DJD 03, Question 2.

²See Attachment II, DJD 09, Questions 2a, b.

Table 1-B: Point of Contact Information. Please identify a knowledgeable point of contact familiar with the information relating to this closure/realignment scenario whom the BSAT can contact to answer any questions or to provide additional information as required. This point of contact must also be familiar with the location and name of the person responsible for maintaining any supporting documentation relating to this data call response.

Name:	CDR L. R. Walker, USN
Organization/Code:	OIC, NSWC-Annapolis, Code 003
Office Phone Number:	410-293-2536 (DSN: 281-2536)
Fax Number:	410-293-2638 (DSN: 281-2638)
Home Phone Number:	410-757-0449

Table 1-C: Losing/Gaining Bases Involved in Scenario. Complete the table on the next page to identify "bases" involved in the closure/realignment scenario. Note that the term "**Losing Base**" refers to host activities, independent activities or other activities specifically identified in the Scenario Development Data Call tasking which are being reduced in size, i.e., closing or being realigned. The term "**Gaining Base**" refers to host or independent activities which will be receiving sites for functions/personnel transferred from losing base(s). For example, a losing base is the activity referred to in the data call tasking, i.e., a Naval Station,

Table 1-C: Losing/Gaining Bases Involved in Scenario. Complete the table on the next page to identify "bases" involved in the closure/realignment scenario. Note that the term "**Losing Base**" refers to host activities, independent activities or other activities specifically identified in the Scenario Development Data Call tasking which are being reduced in size, i.e., closing or being realigned. The term "**Gaining Base**" refers to host or independent activities which will be receiving sites for functions/personnel transferred from losing base(s). For example, a losing base is the activity referred to in the data call tasking, i.e., a Naval Station, Hospital, etc. **Individual tenants should not be separately listed on this table**, e.g., Branch Medical Clinic, Personnel Support Detachment, etc. Individual tenants will, however, be specifically identified in subsequent tables in the data call. The third column of the table should be used to identify relevant information regarding workload/missions to be transferred. For example, entries in this column should be short phrases such as, "missile workload", "ships", "F-14 squadrons", "tenants", etc., or to provide other clarifying information. This third column need only be completed to identify major components of the closure/realignment scenario, and should not be used to list all tenant names, etc.

Table 1-C: Losing/Gaining Bases Involved in Scenario

Losing Base(s)	Gaining Base(s)	Workload/Missions Transferring
NSWC-Annapolis/Nike	NSWC-Philadelphia	Sea Survival/Life Saving Sys, Machinery R&D, Systems Integration and Acquisition Support including Machinery Acoustic Silencing (See Attached Table for description of relocated facilities)
NSWC-Annapolis	NSWC-Carderock	Information Systems R&D ¹
NSWC-Annapolis/Nike Site (BRAC 91 Function Realignment To Carderock)	NSWC-Carderock	Materials & Processing: Thermal Spray; Polyurethane Processor; & Reactive Metals Spray Forming Facilities
NSWC-Annapolis	NSWC-White Oak	Electromagnetic Signatures and Silencing Systems (See Attached Table for description of relocated facilities) ²
NSWC-Annapolis/Nike Site	Naval Research Laboratory Chesapeake Beach Detachment	Intermediate-Scale Fire Testing ³
NSWC-Annapolis	Annapolis, MD-Leased Space	Joint Spectrum Center ⁴

Note: If an activity/function will be relocated into leased office space, please note this fact under the column, Gaining Base, e.g., "Washington, DC - Leased Space".

¹See Attachment II, DJD 08, Questions 3a, b.

²See Attachment II, DJD 08, 010, 025, 026.

³See Attachment II, DJD 03, 009.

⁴See Attachment II, DJD 02, 004.

Table 1
Seven Major Facilities Relocated from Annapolis

Facility Name	One-Time Unique Move Cost	Receiving Site	Description // Rationale
Advanced Shipboard Auxiliary Machinery Facility	\$2.2M	Philadelphia	Laboratories, test bays and equipment for conduct of R&D, integration, and experimental test and evaluation on compressed air systems, heat exchangers, ventilation systems, fluid systems, piping, valves, hydraulic steering and diving systems, fresh water production, and composite machinery for surface ships and submarines. // Retains critical technical capability rated highest in value at Annapolis.
Electric Power Technology Facility	\$3.0M	Philadelphia	Laboratories, test bays, simulation equipment, multiple interconnected electrical power sources, loads and transmission equipment for conduct of R&D, integration and experimental test and evaluation of surface ship, submarine, and aircraft carrier electric power generation, conversion, and distribution systems and equipment, and solid state power device R&D. // Retains the critical test capability rated second in value at Annapolis.
Advance Electric Propulsion Development Facility	\$2.3M	Philadelphia	Laboratory, test bay, and equipment to allow R&D and experimental evaluation of full scale and subscale electric propulsion components and systems up to 3000 horsepower. Includes prime movers, loads, support equipment, and experimental motors and generators. // Retains critical propulsion R&D capability and complements planned full scale electric drive systems testing in Philadelphia.
Pulsed Power Facility	\$2.0M	Philadelphia	Experimental facility including staging and assembly area, prime power and fuel system, high voltage grounding grid, electromagnetic interference shielding, pulse forming networks, transmission lines and power conditioning for R&D and experimental testing and integration of pulsed power electrical sources for future weapons systems. // Continue Navy's only integral capability to conduct R&D for future weapons systems powering.

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Facility Name	One-Time Unique Move Cost	Receiving Site	Description // Rationale
Advanced Propulsion Machinery Facility	\$10.0M	Philadelphia	Consists of a full scale submarine shaftline, full scale submarine shaft seal test facility, and a full scale composite shaft tracer/bending facility including instrumentation, controls and required cooling, lubrication, and other services. // Allows retention of a unique Navy capability to conduct full scale submarine shaftline component and system R&D and qualification/certification.
Machinery Acoustics Silencing Facility	\$4.9M	Philadelphia	An R&D facility consisting of three cells for reduction of submarine machinery acoustic noise from fans, pumps, compressors, motors, hydraulics, and other machinery components. Includes acoustic wall treatment, massive seismicly isolated floor, specialized low noise support systems, instrumentation, resilient mount laboratory, and many low noise prototype components. // Retains the Navy's only integral capability to conduct R&D, evaluate, specify, and certify machinery acoustic performance in a land based facility, thus avoiding the prohibitive cost of doing so at sea.
Magnetic Fields Laboratory ¹	\$5.0M	White Oak	A very specialized facility including a totally non-magnetic four story building equipped for operation of full scale minesweeper machinery and measurement of its acoustic signature as well as that of large scale models of submarines and surface ships. The capability of simulating ambient magnetic conditions of any location on Earth is included. // Retains the only existing critical capability to measure and certify the magnetic signature of minesweeper machinery.

¹See Attachment II, DJD 08, 010.

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Intermediate-Scale Fire Testing¹ to the Naval Research Laboratory, Washington, DC, where this will place at one activity all non-laboratory fire testing functions, which can be conducted at NRL, Chesapeake Beach Detachment. The existing fire testing facilities at NRL do not duplicate and are not adequate for the intermediate-scale fire testing work identified in this scenario response. The Fire Research Enclosure (Fire 1), located at the Chesapeake Beach Detachment, NRL) and the ex-USS SHADWELL (located at Mobile, AL) are extremely large-scale custom-built, and specialized facilities dedicated to validate and certify full-scale ship fire scenarios for active and passive fire protection systems. The other facilities at NRL are large-scale burn chambers, which are not suitable to perform intermediate scale fire testing without modification. However, these burn chambers are necessary in their present configurations to meet existing Navy requirements. The other facilities at the Chesapeake Beach site are primarily open building spaces, which do not contain the specialized intermediate-scale equipments being transferred from NSWC, Carderock Division, Special Area (NIKE Site) as identified in the Scenario response. This specialized equipment includes: a room-sized calorimeter, a large-scale customized variable heat rise furnace, and two intermediate scale burn chambers containing accessories, controls and associated instrumentation need to operate them. The unused building space at NRL/CBD can be modified to house the aforementioned specialized equipment, that is necessary to execute the Intermediate-scale fire testing function/requirement. The intermediate-scale fire testing is a cost-effective means to screen and select fire protection system alternatives, which are then validated and certified with associated higher test costs in the full-scale NRL facilities (Fire-1 and ex-USS SHADWELL).

Sea Survival/Life Saving Systems to NSWC, Philadelphia, where the T&E and ISE of sea survival/life saving equipment can be conducted in conjunction with damage control/CBR protection function in place at the Philadelphia site.

Elements of Materials & Processing to NSWC, Carderock, which includes the thermal spray, polyurethane processing, and reactive metal spray forming facilities, would be colocated with the existing Materials & Processing function in the Ship Materials Technology Facility (BRAC-91 action) at the NSWC, Carderock Site.

Information Systems R&D² capability to NSWC-Carderock consisting of a computer complex and personnel physically residing at the Carderock site, but assigned to the Annapolis site Machinery R&D Directorate.

Joint Spectrum Center³ is a tenant at the NSWC Annapolis Site. None of the employees are associated with the NSWC Annapolis Site functions.

¹See Attachment II, DJD 03, 009.

²See Attachment II, DJD 08.

³See Attachment II, DJD 02, 04.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

Complete a separate Enclosure (2) - Losing Base Questions for each "losing" base involved in the closure/realignment scenario. Make additional copies of this enclosure as necessary. Tables included in this enclosure are 2-A, 2-B, 2-C, 2-D, 2-E, and 2-F. Enter the Losing Base name in the block below:

Losing Base:	NSWC-Annapolis
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The first five tables in this enclosure will be used to identify the movement and/or elimination of military billets and civilian positions. Data entered in Tables 2-B and 2-C will be transferred to Table 2-D and will be used to reconcile manpower totals at the losing base. The entire losing base workforce as shown on the annotated copy of the Base Loading Data Attachment must be accounted for in the Table 2-D reconciliation.

General Note on Tables 2-A and 2-B. A separate copy of both of these two tables must be completed for each pair of activities between which transfers of personnel, equipment or vehicles will occur. That is, a single enclosure (1) response may require multiple copies of tables 2-A and 2-B. For example, if the scenario involves the closure of NAVSTA A and relocation of personnel to NAVSTA B and NAVSTA C, then two tables will be completed, one for transfers from NAVSTA A to NAVSTA B and one for transfers from NAVSTA A to NAVSTA C. Note that for purposes of completing these tables, Losing Bases and Gaining Bases are defined as a host activity, independent activity or other activity specifically identified in the data call tasking. Separate tables will not be prepared for individual tenant activities, instead, tenant numbers will be incorporated into the table for the Losing Base. Be certain to identify the name of both the gaining and losing base. Make additional copies of these two tables as necessary.

Table 2-A: Disposition of Personnel - Detail Data. Please review the Base Loading Data Attachment and annotate any corrections, as necessary. Using the data contained in the Base Loading Data Attachment, complete the table on the next page. For both the host and tenant activities, identify, by UIC, the number of billets/positions being relocated to the identified receiving site. Each UIC shown as a separate line on the Base Loading Data Attachment must be separately listed in Table 2-A. Drilling reservists will not be included in officer and enlisted billet fields. Military students must be separately distinguished from officer and enlisted billets in COBRA. The Base Loading Data Attachment includes an identification of military students. Annotate the Base Loading Data Attachment to identify any additional students not currently shown, and include these corrected numbers in Table 2-A. Numbers of students are expressed as the estimated "Average On-Board" (AOB) which would be trained at the losing base in FY 2001 if a closure/realignment did not occur. Non-DON tenants must also be reviewed and a determination made as to whether the organization will be relocated.

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Relocating non-DON tenants must be included in the number of billets/positions identified as being transferred (and manpower totals adjusted accordingly). Disposition of tenant and reserve activities must be adequately coordinated.

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Table 2-A(1): Disposition of Personnel - Detail Data

From Losing Base: NSWC-Annapolis									
To Gaining Base: NSWC-Philadelphia									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
61533	NSWC-Annapolis	Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	107	140	14	0	0	0	261
		Mil Stu	0	0	0	0	0	0	0
	TOTAL	Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	107	140	14	0	0	0	261
		Mil Stu	0	0	0	0	0	0	0

Table 2-B: Disposition of Personnel and Equipment - Summary. Complete the table on the next page to summarize the transfer of equipment and personnel. Personnel numbers must match summary data shown in Table 2-A. Remember that, as with Table 2-A, a separate Table 2-B must be completed for each combination of losing/gaining bases. The following explanatory information is provided.

a. Disposition of Personnel. Transfer the summary relocation data shown at the bottom of the corresponding Table 2-A.

b. Disposition of Equipment. Identify the transfer of equipment and vehicles from one activity to another. **Do not include equipment which will be excessed.** The following explanatory notes are provided:

Mission and Support Equipment: The terms "Mission" and "Support" are provided as broad general terms to distinguish between the types of equipment which will be shipped. In terms of the COBRA moving algorithms, whether equipment is listed under "Mission" or "Support" is irrelevant. Consequently, more attention should be given to identifying the total number of tons which will need to be shipped, rather than spending too much time refining the breakout of mission vs. support equipment. Note that these figures should not include administrative equipment, which is already included in COBRA algorithms at the rate of 710 pounds per military billet or civilian position being relocated.

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Light Vehicles: Light vehicles are defined as vehicles that will be **driven** to the new location.

Heavy Vehicles: Heavy vehicles are defined as vehicles which will be **shipped** to the new location.

Remember to complete the "Supporting Data" section which immediately follows the table.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-B: Disposition of Personnel and Equipment - Summary.^{1,2}

Table 2-B(1): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC-Annapolis							
To Gaining Base: NSWC-Philadelphia							
	1996	1997	1998	1999	2000	2001	Total
Officer Billets	0	0	0	0	0	0	0
Enlisted Billets	0	0	0	0	0	0	0
Civilian Positions	107	140	14	0	0	0	261
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	290	910	330	0	0	0	1530
Tons of Support Equipment	40	53	5	0	0	0	98
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

¹See Attachment II, DJD 011, Question 1.

²See Attachment II, DJD 022, Questions 1, 2.

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Enclosure (2) - LOSING BASE QUESTIONS

<u>Type of Equipment/Vehicles</u>	<u>Rationale for Relocating</u>
Individual support equipment (97 tons)	Support equipment includes equipment each person uses in the course of their new job, such as computers, printers, books, reference documents, etc. It is calculated using an estimate of 750 lbs/person.
Sea Survival/Life Saving Equipment (1 ton)	Provides assurance of specification compliance, modification/alteration to correct fleet deficiencies, QPL testing/certification, evaluates commercial equipment, and develops new marine equipment. Loss of capability results in reduced safety for sailors/marines and increased risk for loss of life.
Advanced Propulsion Machinery Facility	(see attached narrative)
Advanced Shipboard Auxiliary Machinery and Pulsed Power Facilities	(see attached narrative)
Advanced Electric Propulsion Development Facility and Electric Power Technology Lab	(see attached narrative)
Machinery Acoustic Silencing Laboratory	(see attached narrative)

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

**JUSTIFICATION FOR THE RELOCATION OF THE ADVANCED PROPULSION
MACHINERY FACILITY FROM ANNAPOLIS SITE TO PHILADELPHIA SITE**

Value/Benefit to Navy DoD. Propulsion machinery systems are the engines (non-nuclear), reduction gears, shafting, bearings and associated components which provide mobility, range, and endurance to surface ships, submarines and craft. These systems have a very large impact on ship readiness, sustainability, signatures, energy consumption, potential for water/air pollution, and cost. For example, on surface ships propulsion machinery systems account for about 25% of acquisition cost, 20% of maintenance, and 30% of crew manpower. This technical capability supports the Joint Mission Areas of strike, littoral, strategic deterrence, strategic/sealift, protection, and forward presence. The Navy gains significant benefits from this technical capability with "smart" buying of propulsion machinery because of the impact on mission performance, cost, and crew skills and size.

Propulsion machinery systems are typically competitively procured as contractor furnished equipment by the shipbuilder and are a collection of components from a number of manufacturers. There is little standardization or system level engineering capability within industry and virtually no facilities for concept and equipment evaluation and certification.

For propulsion machinery systems, the Navy establishes technical requirements, assesses and directs technology development, certifies and validates hardware, and provides support through the equipment life cycle. This technical capability provides the facilities, experience, and knowledge base to establish and validate technical requirements to assure "smart" acquisitions, affordable operations and maintenance, and on-going problem resolution/system upgrade capabilities. The knowledge base contributes to establishing Navy program priorities and policies.

Statistics. Science & Technology (4 DWY); Acquisition Engineering (25 DWY) for a total of 29 DWY's.

Cumulative Experience Base. This capability has 25 Scientists, Engineers and technicians with a cumulative experience base of greater than 400 years at Annapolis.

Facilities and Equipment. Advanced Propulsion Machinery Facility; Engine Development Laboratory; Shaftline Facility; Composite Shaft; Shaft Seal; and Thrust Bearings.

Navy/DoD Imperatives. This capability ensures that ships and ship systems can be designed, constructed, safely operated and maintained with the best and most suitable shipboard propulsion machinery systems and components to achieve efficiency, weight & volume, power, signature, survivability and affordability (acquisition and life cycle) performance goals of the Navy. This site provides the Navy with Scientists and Engineers that are not

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influenced by proprietary or profit motives to improve, integrate and evaluate ship propulsion machinery systems.

Future Requirements. Intercooled and Recouperated LM2500 (ICR) Lead ship SSN-21 Sea Trial Support; SSN-688 Improved Shaft Seal; NSSN. New more efficient, affordable propulsion machinery systems and equipments to meet Navy requirements for reduced cost, increased combat readiness, and sustainability on 21st century Navy ships and submarines with smaller crews and platforms with limited infrastructure support.

Inherently Government Functions. (1) A "Smart Buyer" capability by providing the RDT&E necessary to transform Navy requirements into technical/procurement specifications (military and commercial), certification criteria and validation of designs for integrated naval propulsion machinery systems and components for the fleet; (2) Rapid response to operational problems; (3) Ensure technological superiority and avoid technological surprise by translating new technologies and rapidly changing threats to system change; and (4) Objective/unbiased direction, evaluation, and monitoring of contractors. These efforts are categorized as: 3% Sponsor, 76% Conduct, and 21% Appraise.

Customers. Major customers of this site in FY93 were NAVSEA, ONR, and Other Navy.

Alternatives. No other activity currently provides this Machinery R&D, Systems Integration and Acquisition Support capability for shipboard propulsion machinery systems and components. Parts of this technical capability exist at commercial activities, but currently there is no single source that can provide the propulsion machinery systems integration expertise coupled with the critical facilities required to develop, design, assess and specify naval shipboard propulsion machinery systems to meet the stringent requirements for 21st century ships and submarines.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

**JUSTIFICATION FOR THE RELOCATION OF ADVANCED SHIPBOARD
AUXILIARY MACHINERY FACILITY AND PULSE POWER FACILITY FROM
ANNAPOLIS SITE TO PHILADELPHIA SITE**

Value/Benefit to Navy DoD. This Annapolis Site technical capability ensures that the Navy will continue to have the best ships and submarines in the world powered by the best HM&E Systems in the world. Technical work in auxiliary machinery systems focuses on the development and specification of affordable shipboard systems and components with enhanced performance and efficiency attributes. Full spectrum shipboard auxiliary machinery R&D, systems integration and acquisition support capabilities provide the critical expertise and facilities which are integrated with other HM&E technical capabilities (Propulsion Machinery and Electrical Machinery) at the Annapolis Site to meet demanding Navy requirements for reduced costs, and increased combat readiness and sustainability. As an example, the loss of the Annapolis Site would compromise the ability to integrate emerging mechanical and electrical technologies into cost-effective developments such as the Affordability Through Commonality and the Advanced Surface Machinery Programs; the Standard Machinery Control System; auxiliary elements of the Autonomic Ship; and the Electrothermal Gun. Annapolis facilities and expertise also ensure SUBSAFE machinery including seawater piping and components, and hydraulic steering and diving systems, and are integral to the development of affordable future pulsed-power strike and self-defense systems which exploit installed ship power such as the electric gun in a combined Dahlgren-Annapolis program.

Statistics. Science & Technology (10 DWY); Acquisition Engineering (98 DWY) for a total of 108 DWY's.

Cumulative Experience Base. This capability has 104 Scientists, Engineers and technicians and a cumulative experience base of greater than 2000 years at Annapolis.

Facilities and Equipment. Advanced Shipboard Auxiliary Machinery Facility; Fiber Optic Sensor Technology Laboratory; and Pulsed Power Systems Facility.

Navy/DoD Imperatives. Auxiliary machinery systems are essential elements in Naval missions. This technical capability certifies and validates the technical standards that allows ships to operate in all climates, remain at sea for extended periods, operate damaged when needed and maintain crew safety. Auxiliary machinery and pulse power are key elements in the full spectrum mission of the Carderock Division of the NSWC. This technical capability is the Navy's source of expertise and is required for other NSWC technical capabilities: Stealth, Propulsion, Electrical, Hull & Deck Machinery Systems Components, Hull Forms & Propulsors, Small Surface & Undersea Vehicles, Environmental Quality Science & Systems, Mine Warfare Systems, Amphibious Warfare Systems, Deep Ocean Technology, and Machinery Monitoring and Control. This site provides the Navy with Scientists and

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Engineers that are not influenced by proprietary or profit motives to improve, integrate and evaluate ship/submarine auxiliary machinery systems. This capability allows the Navy to purchase new technology and systems as a "smart buyer" and to make system level decisions on affordable operation and maintenance policy which directly influences readiness.

Future Requirements. Lead ship SSN-21 Sea Trial Support; NSSN; DDG-51 Flight II, LPD-17, Next Generation Surface Combatant. This capability is vital to the Navy of the future which demands auxiliary systems that will operate longer with less maintenance and downtime, meet strict technical guidelines, fulfill budget and manning reductions and effectively counter and contain threats that new and deadly weapons pose to the fleet. The substantial investment that auxiliary machinery systems and components represent over a ships life cycle (14% by weight, 23% by cost and 30% of total maintenance hours) is compelling reason for maintenance of an organic auxiliary machinery systems technical capability.

Inherently Government Functions. (1) A "Smart Buyer" capability by providing the RDT&E necessary to transform Navy requirements into technical/procurement specifications (military and commercial), certification criteria and validation of designs for integrated naval propulsion machinery systems and components for the fleet; (2) Rapid response to operational problems including in times of military crisis (technical analysis and fitness for purpose assessment of vital/critical ship systems); (3) Ensure technological superiority and avoid technological surprise by translating new technologies and rapidly changing threats to system change; and (4) Objective/unbiased direction, evaluation, and monitoring of contractors. These efforts are categorized as: 21% Sponsor, 66% Conduct, and 13% Appraise.

Customers. Major customers of this site in FY93 were NAVSEA, ONR, and Other Navy.

Alternatives. No other activity currently provides the Machinery R&D, Systems Integration and Acquisition Support capability for shipboard auxiliary machinery systems and components. Parts of this technical capability exist at commercial activities, but currently there is no single source that can provide the auxiliary machinery systems/components integration expertise and the critical facilities required to develop, design, assess and specify naval shipboard auxiliary machinery systems to meet the stringent requirements for 21st century ships and submarines.

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**JUSTIFICATION FOR THE RELOCATION OF THE ADVANCED ELECTRIC
PROPULSION DEVELOPMENT FACILITY AND THE ELECTRIC POWER
TECHNOLOGY LABORATORY FROM THE ANNAPOLIS SITE TO THE
PHILADELPHIA SITE**

Value/benefit to Navy DoD. Advanced technology such as superconducting and permanent magnet electric drive and integrated power systems will provide ship architectural advantages, improved commonality of system elements will reduce logistic support burden, intelligent distribution systems will enhance passive survivability, improved warfighting will result from assuring continuity of energy supply to combat systems, and improved energy efficiency will result from deriving electric power from propulsion engines and/or fuel cells. This technology will be required to meet platform affordability, survivability, mobility, and performance. The Annapolis Site provides a unique combination of facilities and expertise to conduct research and development, experimental evaluations and simulations for electrical machinery systems and components in support of the Navy, other DOD components, and the Maritime Industry. The functions carried out under this technical capability are inherently governmental in that work includes exploration and development of new concepts, validation of technical requirements, assessment of feasibility and practicality of proposed solutions, development of systems level solutions and transition of DOD technology to the private sector. This forms the basis for being the Navy's expert for electrical machinery and gives the Navy the ability to make smart acquisition decisions.

Statistics. Science & Technology (63 DWY); Acquisition Engineering (25 DWY) for a total of 88 DWY.

Cumulative Experience Base. 82 Scientists Engineers and Technicians with an experience base of 1700 years.

Facilities. Advanced Electric Propulsion Development Facility; Electric Power Technology Facility.

Navy/DoD Imperatives. The Annapolis Site is pursuing congressionally-mandated developments in circuit breakers and MHD. The unique combination of expertise and facilities are used by both DOD and others for critical developments such as the S9G electric plant for NSSN, the Integrated Power System for SC-21, as well as support for SEAWOLF and AEGIS ship construction programs and developments for in service fleet assets. This capability assures that ships and ship systems can be designed constructed, operated, and maintained with the best and most suitable electrical machinery and components to achieve efficiency, size, power, signature, and affordability (acquisition and life cycle) performance goals of the Navy. This site provides the Navy with scientists and engineers that are not influenced by proprietary or profit motives to improve, integrate, and evaluate ship/submarine

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electrical machinery systems. Under "Project Reliance," the Annapolis Site is pursuing cooperative development (\$31M Navy contract) of advanced power semiconductor devices and applications with the Air Force, NASA, Army, ARPA, and the Electrical Power Research institute. Initiatives in electric propulsion include joint efforts with shipyards and key industrial suppliers. Cooperative efforts in the areas of superconducting magnets, magnetic energy storage, advanced circuit breakers, permanent magnet motors, and new power converter topologies are being pursued at the Annapolis Site, and Data Exchange Agreements with foreign Navies (MWDDEA-N-83-G-4233) are actively utilized.

Future Requirements. New reduced weight, volume, and cost electric power machinery systems will be required to meet the Navy's requirements for affordable, combat damage-tolerant, and efficient 21st century fleet assets with smaller crews and limited infrastructure support. The Navy will also require technical leadership in advanced power technologies which are even now being applied to mine sweeping and ultra high power sonar systems.

Inherently Governmental Functions. The tasks of establishing, certifying, and validating system performance is supported by a broad array of capabilities including full-scale testing of ship electric power machinery, rapid-prototyping of system conceptual designs, component fabrication technology, and simulation-based extrapolation of test results to predict performance of alternative designs and emerging technologies. Specific support services offered by the Annapolis Site with respect to electrical machinery include: (a) development of flexible, integrated electrical machinery systems to accommodate advanced hull forms, propulsor techniques, power sources and performance requirements, (b) maximum utilization of affordable commercial components and transfer of military technology to the industrial manufacturing sector, and to other governmental agencies, and (c) performance analysis of electrical machinery systems and components.

Customers. Primary customers are ONR and NAVSEA, secondary sources include NAVAIR, ARPA, MSC, DNA, private industry and shipyards along with cooperative research with Tri-Services/NASA.

Alternatives. No other activity provides the full spectrum machinery R&D, systems integration support capability for shipboard electrical machinery systems and components. Complete loss of facilities would likely result in a long term loss of technical expertise derived from hands-on experimentation with emerging technology and complicated systems.

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**JUSTIFICATION FOR THE RELOCATION OF THE MACHINERY ACOUSTIC
SILENCING LABORATORY FROM THE ANNAPOLIS SITE TO THE
PHILADELPHIA SITE**

Value/Benefit to Navy DoD. This Carderock Division technical capability ensures the stealth of current and future Navy ships. Responding to Naval Operational Requirements, machinery silencing products and system designs are conceived, developed and brought to fleet implementation to ensure that all Navy ships cost effectively meet operational acoustic signature objectives. The staff of scientists and engineers at the Annapolis Site is highly educated and experienced in all aspects of propulsion and auxiliary machinery acoustics. Supported by an extensive collection of machinery acoustic performance data and world class facilities for acoustic evaluation of full scale machinery components at actual shipboard operating conditions, this group conducts R&D producing silencing innovations for application in our most advanced operational and new-design surface ships and submarines. Machinery silencing innovations continue to be a key to achievement of stringent acoustic stealth objectives, with emphasis on affordability.

Statistics. Science & Technology (6 DWY); Acquisition Engineering (41 DWY) for a total of 47 DWY's.

Cumulative Experience Base. This capability has 53 Scientists, Engineers and Technicians with 47 DWYs and a cumulative experience base of greater than 1400 years at Annapolis.

Facilities and Equipment. Our major, world class facilities, including the Machinery Acoustics Silencing Laboratory, provide the Navy's only capability to conduct R&D using full scale prototypes installed in air, gas, ventilation, fresh water, sea water, and oil systems which duplicate the full range of submarine and surface ship system steady state and transient operating conditions and parameters.

Navy/DoD Imperatives. The Annapolis Site has been tasked to provide the necessary machinery acoustic silencing technology and hardware to help ensure that our Navy's submarines and surface ships meet current and future acoustic operational requirements. Machinery system silencing platform design support is provided and silencing products are conceived, developed and implemented in the fleet to ensure that all Navy ships meet operational acoustic goals and requirements.

Future Requirements. New more cost effective machinery silencing technology and hardware to meet Navy operational requirements for both deep ocean, littoral and special warfare scenarios. Both nuclear and diesel foreign submarines, and mines will continue to impose an acoustic threat. Our Navy must remain acoustically superior to effectively meet these threats.

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Specific support will be required to meet NSSN design requirements and to support post lead ship machinery acoustic issues.

Inherently Government Functions. Advising NAVSEA and PEO organizations on machinery acoustic design and development, and on submarine and surface ship acoustic design, construction and improvement issues is a uniquely Governmental "smart buyer", appraisal function performed by the Annapolis Site based on the perspective gained from conduct of current R&D tasks and on extensive experience of personnel. Specifications for R&D product implementation, technical guidance, design evaluation and hardware trouble shooting services are routinely provided to support silencing technology transition from the laboratory to the fleet. Objective technical support is provided to Navy acquisition managers in oversight of vendor and shipbuilder contract performance. The Annapolis Site specializes in R&D product developments that address Navy machinery acoustic stealth requirements which are not encountered in the commercial sector. Phase III categorized these efforts as: 3% Sponsor, 67% Conduct, and 24% Appraise.

Customers. Major customers of this site in FY93 were NAVSEA, ONR, and Other Navy.

Alternatives. The Annapolis Site is the international leader in Machinery Silencing Technology. There is no other assembly of experienced technical experts and facilities capable of developing and assessing the quietness of full-scale machinery at system operating conditions. For quiet machinery component and acoustic treatment development, other government and private sites lack the demonstrated, machinery specific Research and Development capability of the Annapolis Site. No other activity has the experienced personnel, database and specialized full-scale test facilities necessary to address the full range of propulsion and auxiliary machinery component and piping system noise issues faced in ship and submarine operation and design. Machinery silencing for Navy ships is a unique field learned by participation and by exchange of ideas within a stable workforce of senior and junior professionals. At Annapolis, synergistic benefits are realized by development of solutions to machinery acoustic issues involving both submarines and surface ships and the full spectrum of machinery component types.

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**JUSTIFICATION FOR RELOCATING THE SEA SURVIVAL/LIFE-SAVING
SYSTEMS FUNCTION FROM THE NSWC CARDEROCK DIVISION, ANNAPOLIS
DETACHMENT, SPECIAL AREA (NIKE SITE) TO NSWC PHILADELPHIA SITE.**

Testing, evaluation, and in-service engineering of shipboard life-saving equipment and sea survival systems are conducted to insure compliance to Navy specifications and standards for life safety: recommended changes to specifications, drawings, technical manuals and other related documents pertaining to these equipments are developed; first article and quality conformance evaluations of life-safety equipment are conducted; Fleet problems are resolved and modifications/improvements to existing equipment are recommended; the suitability of nondevelopmental items are evaluated for Navy use; and design changes are recommended as required. This function also serves as an adjudicating activity in litigation and provides expert testimony. This type of testing requires environmental chambers, accelerated aging apparatus, and standard materials testing apparatus. Equipments evaluated include: life preservers, 25-man inflatable life boats, and other sea rescue equipments. The evaluation of these devices requires a large temperature/humidity controlled area of approximately 1000 square feet with a 15-foot wide access. This work encompasses considerable direct interaction with the Fleet and insures increased levels of safety and reduced risk of loss of life for sailors and marines.

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Table 2-A(2): Disposition of Personnel - Detail Data

From Losing Base: NSWC-Annapolis									
To Gaining Base: NSWC-Carderock									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
61533	NSWC-Annapolis ^{1,2}	Officer	1	0	0	0	0	0	1
		Enlisted	0	0	0	0	0	0	0
		Civilian	2	0	0	0	0	0	2
		Mil Stu	0	0	0	0	0	0	0
	TOTAL	Officer	1	0	0	0	0	0	1
		Enlisted	0	0	0	0	0	0	0
		Civilian	2	0	0	0	0	0	2
		Mil Stu	0	0	0	0	0	0	0

¹See Attachment II, DJD 011, Question 4.

²See Attachment II, DJD 018.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-B(2): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC-Annapolis							
To Gaining Base: NSWC-Carderock							
	1996	1997	1998	1999	2000	2001	Total
Officer Billets	1	0	0	0	0	0	1
Enlisted Billets	0	0	0	0	0	0	0
Civilian Positions	2	0	0	0	0	0	2
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	0	30	0	0	0	0	30
Tons of Support Equipment	0	0	0	0	0	0	0
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

Supporting Data for Table 2-B. Use the space below to list the types of Mission Equipment, Support Equipment, Light Vehicles and Heavy Vehicles identified as required to be relocated in Table 2-B and the rationale for relocating this equipment. Attach additional sheets as necessary.

Type of Equipment/Vehicles

Rationale for Relocating

Information Systems R&D Functions - None

Ship Materials R&D Facilities

Thermal Spray Facility (2 tons)

BRAC 91 realigned function to Carderock;
Closure of Nike Site mandates relocation to Carderock Site.

Polyurethane Processor (5 tons)

BRAC 91 realigned function to Carderock;
Closure of Nike Site mandates relocation to Carderock Site.

Reactive Metals Spray Forming Facilities
(23 tons)

BRAC 91 realigned function to Carderock;
Closure of Nike Site mandates relocation to Carderock Site.

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JUSTIFICATION FOR RELOCATING THE INFORMATION SYSTEMS¹ R&D FUNCTION FROM ANNAPOLIS SITE TO THE CARDEROCK SITE

The Information systems R&D function develops network concepts and software for machinery control as well as other types of information transfer and access on a much larger scale. This well supported capability, with a small computer facility, is already located at the Carderock Site, although Annapolis has cognizance. No significant cost is involved in the "relocation".

JUSTIFICATION FOR RELOCATING THE MATERIALS & PROCESSING FACILITIES FROM NSWC, CARDEROCK DIVISION, ANNAPOLIS DETACHMENT, SPECIAL AREA (NIKE SITE) TO THE CARDEROCK SITE

The Ship Materials R&D functions were realigned during BRAC 91 to the Carderock Site. The field test facilities were retained at the Nike Site to minimize costs and associated disruptions. The closure of the Nike Site directs these critical facilities be moved to the Carderock Site, thereby being co-located with the remainder of the Materials R&D functions. No personnel realignments are required as they were included in the BRAC 91 actions.

¹See Attachment II, DJD 08.

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Table 2-A(3): Disposition of Personnel - Detail Data

From Losing Base: NSWC-Annapolis ¹									
To Gaining Base: NSWC-White Oak									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
61533	NSWC-Annapolis	Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	8	9	0	0	0	0	17
		Mil Stu	0	0	0	0	0	0	0
	TOTAL	Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	8	9	0	0	0	0	17
		Mil Stu	0	0	0	0	0	0	0

¹See Attachment II, DJD 08, 010, 025, 026.

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Table 2-B(3): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC-Annapolis ¹							
To Gaining Base: NSWC-White Oak							
	1996	1997	1998	1999	2000	2001	Total
Officer Billets	0	0	0	0	0	0	0
Enlisted Billets	0	0	0	0	0	0	0
Civilian Positions	8	9	0	0	0	0	17
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	0	60	0	0	0	0	60
Tons of Support Equipment	3	3	0	0	0	0	6
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

Supporting Data for Table 2-B. Use the space below to list the types of Mission Equipment, Support Equipment, Light Vehicles and Heavy Vehicles identified as required to be relocated in Table 2-B and the rationale for relocating this equipment. Attach additional sheets as necessary.

Type of Equipment/Vehicles

Rationale for Relocating

Magnetic Fields Laboratory (60 tons)
 Individual support equipment(6tons)
 new site

(see attached narrative)
 Enable engineer to function properly at
 (750 lbf/person)

¹See Attachment II, DJD 08, 10, 025, 026.

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JUSTIFICATION FOR THE RELOCATION OF MAGNETIC FIELDS LABORATORY SYSTEM FROM THE ANNAPOLIS SITE TO THE WHITE OAK SITE¹

Value/Benefit to Navy DoD. This capability is focused toward the reduction of electromagnetic field signatures in the frequency range of D.C. through 10 KHz to acceptable threat levels. Responding to Navy Operational Requirements and Top Level Requirements, signature and silencing products are conceived, developed and brought to fleet implementation and ensure that all Navy ships have the lowest possible signatures compatible with the ship's mission. The technology is applicable to surface ships, submarines and minesweepers and includes R&D in addition to test and evaluation of silencing systems and acquisition support. The loss of the Annapolis site would result in the severe degradation of the Navy's capability and corporate memory in submarine electromagnetic silencing and surface ship EM signature exploratory development.

Statistics. Science & Technology (22 DWY).

Cumulative Experience Base. This capability has 16 Scientists, Engineers and technicians with a total of 22 DWYs and cumulative experience base of greater than 500 years at Annapolis. Note that 17 personnel are recommended to move with this capability.

Facilities and Equipment. Magnetic Fields Laboratory (MFL), located in Annapolis MD, is the measurement complex that provides a magnetically clean environment for accurate measurement of magnetic fields of full-sized machinery operating under load. This machinery includes equipment such as motors, generators, bow thruster motors, motor controllers, etc. for use aboard ships such as minesweepers. The facility will also be upgraded to accommodate measurement of large-scale physical models of ships such as the new attack submarine. These measurements are required in order to support degaussing coil design and calibration procedures. The MFL is the only facility in the U.S. that can provide these functions.

Navy/DoD Imperatives. NSWC has been chartered to provide electromagnetic signature measurement, analysis and control for surface ships and undersea vehicles. To that end, NSWC provides an integrated signature reduction program that includes: technical program management; accountability, validation and certification; signature measurements and modeling; analysis of results; development of signature-control techniques; ship and ship-system design; stealth operational guidance and tactics; training of forces ashore and afloat. Signature and silencing products are conceived, developed, brought to fleet implementation, and supported to ensure that all Navy ships have the lowest possible vulnerability to detection, classification and targeting. NSWC's in-house expertise ensures that the Navy is a "smart buyer" of signature-reducing technologies, that solutions are cost-effective, and that they are compatible with ship missions. Signatures addressed at Annapolis are in electromagnetics in the D.C. through 10 kHz range.

¹See Attachment II, DJD 08, 010, 025, 026.

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Future Requirements. Recent Navy experience has demonstrated the dangers of the rapid proliferation of mines among third-world countries. To minimize the vulnerability of Navy vehicles to these and similar threats, the Navy must continue to develop improved and affordable technologies for reducing the electromagnetic signatures of ships.

Inherently Government Functions. NSWC personnel respond to Navy Operational Requirements and Top-Level Requirements by conceiving, developing and bringing to fleet implementation signature and silencing products. About 25% of the effort is spent performing the Sponsor and Appraise functions: the remaining 75% Conduct portion allows NSWC to maintain an appropriate balance of in-house expertise and out-of-house support.

Customers. Major customers in FY93 included NAVSEA, ONR, PEO-SUB, OPNAV, CIA, private industry and other Navy. Programs include joint efforts with other countries under approved international agreements.

Alternative: Annapolis and White Oak both have technical capability in Electromagnetic (EM) Signature and Silencing Systems which include facilities and people. This combined group represents the Navy's only capability in this inherently Governmental function. Closing the Annapolis site and not transferring any of the functions will severely impact the Navy's EM Signatures and Silencing efforts. We propose to consolidate and relocate all capabilities including 17 people of the Magnetics Fields Laboratory at Annapolis with the complementary electromagnetic signature complex owned by the NSWCCD, located at the NSWCCD-White Oak site. The advantages of the proposal is that the magnetic silencing expertise is preserved and the capability to measure operating ships machinery and all scale-physical models is preserved.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-A(4): Disposition of Personnel - Detail Data

From Losing Base: NSWC-Annapolis ¹									
To Gaining Base: NSWC-Naval Research Laboratory, Chesapeake Beach Detachment									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
		Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	0	0	0	0	0	0	0
		Mil Stu	0	0	0	0	0	0	0
		Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	0	0	0	0	0	0	0
		Mil Stu	0	0	0	0	0	0	0

¹See Attachment II, DJD 03, 09.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-B(4): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC-Annapolis ¹							
To Gaining Base: NSWC-Naval Research Laboratory, Chesapeake Beach Detachment							
	1996	1997	1998	1999	2000	2001	Total
Officer Billets	0	0	0	0	0	0	0
Enlisted Billets	0	0	0	0	0	0	0
Civilian Positions	0	0	0	0	0	0	0
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	0	49	0	0	0	0	49
Tons of Support Equipment	0	0	0	0	0	0	0
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

Supporting Data for Table 2-B. Use the space below to list the types of Mission Equipment, Support Equipment, Light Vehicles and Heavy Vehicles identified as required to be relocated in Table 2-B and the rationale for relocating this equipment. Attach additional sheets as necessary.

Type of Equipment/Vehicles

Intermediate-scale Fire Testing (49 tons)

Rationale for Relocating

Provides for fire evaluation and assessment of scaleable structural and full size machinery components as to failure mode and property loss during fires. Loss of capability would result in conducting more expensive large-scale testing prior to final decision on structural concepts and ship systems.

¹See Attachment II, DJD 03, 09.

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Justification for Relocating the Intermediate-Scale Fire Testing Function¹ from the NSWC, Carderock Division, Annapolis Detachment, Special Area (NIKE Site) to NRL, Chesapeake Beach Detachment.

Intermediate-scale Fire Testing (ISFT) provides a cost-effective means of evaluating the fire response of all shipboard systems, items and equipment. This function provides the ability to evaluate in a scalable manner, the failure mode and properties loss of shipboard systems during a fire event and the development of fire risk scenarios. ISFT is used to conduct RDT&E which links the configuration of surface ship and submarine passive protection systems, and the survivability of HM&E equipment against weapon effects. Many tests and criteria pertain only to the Navy due to ship construction materials, high weapon and fuel components, compartment orientation, and weapon threats. ISFT provides a bridge between small and large scale testing and enhances the confidence that small scale results will indeed predict large scale behavior. In many cases ISFT provides verification of bench scale results indicating that large scale testing may not be required. ISFT is used to evaluate ship systems to include: submarine hull insulation, acoustic treatments, thermal insulation, shipboard electrical cables, coating systems, shipboard piping systems, and ducting. These items require realistic scale fire evaluation with simulation of shipboard fire conditions. ISFT evaluations requires burn chambers, water pumping capabilities, smoke precipitation, and test fixture/rig fabrication, which results in fire sizes, up to and including 200 kW. There are also numerous requirements for environmental hazard minimization, e.g., air and ground water contamination control, which require permits, licenses, etc. These requirements are easily met at NRL, Chesapeake Beach Detachment. machinery components as to failure mode and property loss during fires. Loss of capability would result in conducting more expensive large-scale testing prior to final decision on structural concepts and ship systems.

¹See Attachment II, DJD 03, 09.

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Table 2-A(5): Disposition of Personnel - Detail Data Table

From Losing Base: NSWC-Annapolis									
To Gaining Base: Annapolis, MD-Leased Space (See Note Below)									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
FFGSNO	Joint Spectrum Center (DoD) ¹	Officer	0	11	0	0	0	0	11
		Enlisted	0	8	0	0	0	0	8
		Civilian	0	115	0	0	0	0	115
		Mil Stu	0	0	0	0	0	0	0
		Officer	0	11	0	0	0	0	11
		Enlisted	0	8	0	0	0	0	8
		Civilian	0	115	0	0	0	0	115
		Mil Stu	0	0	0	0	0	0	0

NOTE: This accomodates the Joint Spectrum Center, presently a tenant at the NSWC Annapolis Site. It is a non-DoN fully owned and operated activity. These personnel reflect the "tenant" levels at this activity for this function.

¹See Attachment II, DJD 02, 04.

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Table 2-B(5): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC-Annapolis ¹							
To Gaining Base: Annapolis, MD-Leased Space, See Note 1 Below							
	1996	1 See Attachment II, DJD #02, 04.997	1998	1999	2000	2001	Total
Officer Billets	0	11	0	0	0	0	11
Enlisted Billets	0	8	0	0	0	0	8
Civilian Positions	0	115	0	0	0	0	115
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	0	See Note 2 Below	0	0	0	0	See Note 2 Below
Tons of Support Equipment	0	See Note 2 Below	0	0	0	0	See Note 2 Below
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

Note 1: This accommodates the Joint Spectrum Center, presently a tenant at the NSWC Annapolis Site. It is a non-DoN owned and operated activity. These personnel reflect the "tenant" levels at this activity for this function.

Note 2: Cost of moving the "mission" and "support" equipment was provided by the Joint Spectrum Center and is included in Table 2-F.c.8.

Supporting Data for Table 2-B. Use the space below to list the types of Mission Equipment, Support Equipment, Light Vehicles and Heavy Vehicles identified as required to be relocated in Table 2-B and the rationale for relocating this equipment. Attach additional sheets as necessary.

Type of Equipment/Vehicles

Rationale for Relocating

Please see Note 2 above

¹See Attachment II, DJD 02, 04.

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Table 2-C: Eliminated Billets/Positions

Using the Base Loading Data Attachment, identify, by UIC, for both the host and tenant activities, the number of military billets and/or civilian positions which will be eliminated as a result of the closure/realignment scenario. For each UIC on the Base Loading Data Attachment where military billets and/or civilian positions will be eliminated, make a separate entry on Table 2-C. Identify the number of Officer Billets, Enlisted Billets and/or Civilian Positions which will be eliminated in each Fiscal Year. Note that for a total closure scenario, the total number of billets/positions moved plus those eliminated must equal the entire workforce at the activity as of the end of FY 2001 as shown on Base Loading Data Attachment. Numbers entered here should reflect a thorough review of staffing requirements at both the losing and receiving sites, and include **all** potential job eliminations which would result from consolidation efficiencies, economies of scale, etc. Reductions should reflect both overhead/support eliminations and direct labor eliminations, as appropriate.

Eliminations should be entered in the year(s) in which they are expected to occur, for example, if 80 civilian positions will be eliminated in FY 2000 and an additional 50 positions will be eliminated in FY 2001, then enter the data as follows: FY 1996 - 1999 = 0, FY 2000 = 80, FY 2001 = 50, Total = 130. **Do not identify any of the following as eliminated billets/positions in Table 2-C:**

- Planned Force Structure Reductions (FY 1996 through 2001).
- Military Students.
- Non-DON tenants.

Drilling reservists should also **not** be included in numbers of eliminated billets. Disposition of any tenant or reserve activities must be adequately coordinated.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-C: Eliminated Billets/Positions

Losing Base Name: NSWC-Annapolis ¹									
UIC	Name	Type	1996	1997	1998	1999	2000	2001	Total
61533	NSWC-Annapolis Detachment	Officer	0	0	1	0	0	0	1
		Enlisted	0	0	0	0	0	0	0
		Civilian	6	98	34	0	0	0	138
FFGSN 0	Joint Spectrum Center ²	Officer	0	0	0	0	0	0	0
		Enlisted	0	0	0	0	0	0	0
		Civilian	0	0	0	0	0	0	0
		Officer							0
		Enlisted							0
		Civilian							0
		Officer	0	0	1	0	0	0	1
		Enlisted	0	0	0	0	0	0	0
		Civilian	6	98	34	0	0	0	138

NOTE 1: This accommodates the Joint Spectrum Center, presently a tenant at the NSWC Annapolis Site. It is a non-DoN owned and operated activity. These personnel reflect the "tenant" levels at this activity for this function.

Note 2: The UIC "FFGSN0" (i.e. Joint Spectrum Center) reflects a "zero" billet/position loss as they are not included in the NSWC Annapolis Site end strengths. There are no NSWC Annapolis employees working at this facility.

Make additional copies of this table, or add rows to it, as necessary, to include each host/tenant activity with eliminated positions/billets.

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Enclosure (2) - LOSING BASE QUESTIONS

Table 2-D: Manpower Reconciliation Data. It is imperative that all manpower is accurately accounted for in the closure/realignment scenario. Using the data from the Base Loading Data Attachment and Tables 2-B and 2-C, complete the "reconciliation" table shown on the next page. Note that Line C of the table should include any changes in manpower resulting from the implementation of prior BRAC actions at the base. These changes should also be annotated on the Base Loading Data Attachment and reflected in Line D of the table, "End FY 2001."

(see next page)

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

Table 2-D: Manpower Reconciliation Data^{1,2}

	Officers	Enlisted	Civilians	Mil Stu	Total
A. Begin FY 1996:	13	8	840	0	861
B. Force Structure Changes(+/-):	0	0	-13	0	-13
C. Prior BRAC Changes (+/-):	0	0	-294	0	-294
D. End FY 2001:	13	8	533	0	554
Moving to (List each Gaining Base):					
1. NSWC-Carderock	1	0	2	0	3
2. NSWC-Philadelphia	0	0	261	0	261
3. NSWC-White Oak	0	0	17	0	17
4. Joint Spectrum Center ¹	11	8	115	0	134
5.					
E. Total Billets/Positions Moving:	12	8	395	0	415
F. Eliminated Billets/Positions:	1	0	138	0	139
G. Remaining at Losing Base:	0	0	0	0	0
H. Sum of Lines E, F, and G:	13	8	533	0	554

Note 1: This accommodates the Joint Spectrum Center, presently a tenant at the NSWC Annapolis Site. It is a non-DoN owned and operated activity. These personnel reflect the "tenant" levels at this activity for this function.

Notes: Do not fill in shaded cells. Double check your work. Line H (which is the sum of number of billets/positions moving, eliminated and remaining at the Losing Base) must equal Line D (the number of billets/positions at the end of FY 2001).

¹See Attachment II, DJD 02, Question 1.

²See Attachment II, DJD 012.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

Table 2-E: Caretaker Requirements (Mothball Scenarios Only). Complete the table below to identify any permanent caretaker requirements associated with a "mothball" (deactivation) scenario. Caretakers should only be identified if an activity will be mothballed as opposed to closed or realigned. Scenario data call taskings will identify if this is a "mothball" scenario. This area should not be used to identify temporary caretaker requirements associated with closure of the facility. If some or all of the activity will be mothballed, as opposed to closed or realigned, then identify the number of military and/or civilian caretakers that will be required to remain permanently at the activity. Enter the number of caretakers which will be added to the activity in each year. For example, if 100 caretakers will be required in 1996, and then this number will be increased to 150 in 1997 and out, then enter 1996 = 100, 1997 = 50, leave 1998 through 2001 blank, and enter 150 as the total.

Table 2-E: Caretaker Requirements ("Mothball" Scenarios Only)

Losing Base Name: NSWC-Annapolis							
	1996	1997	1998	1999	2000	2001	Total
Military Caretakers	0	0	0	0	0	0	0
Civilian Caretakers	0	0	0	0	0	0	0

* Support to be provided by Annapolis Naval Station (or Contractor) for the Deep Ocean Simulation Facility.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
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Table 2-F: Dynamic Base Information

Complete the following "Supporting Data" section. Then, summarize this data in the Summary Data Table (2-F) that immediately follows this "Supporting Data" section. Show all entries in (\$000).

Table 2-F: Supporting Data:

a. Other One-Time Unique Costs. Identify any other one-time unique costs at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). Examples include use of temporary office space, lease termination costs, etc. Only costs directly attributable to the closure/realignment action should be identified. This area should not be used to identify routine moving or personnel costs, which are calculated automatically by the COBRA algorithms, nor should it be used to identify one-time unique moving costs which will be addressed separately in item c. below. For each unique one-time cost, identify the amount, year in which the cost will be incurred and describe the nature of the cost. Do not double count any costs identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC-Annapolis

- | | | | |
|----|-----------|------|---|
| 1. | \$11,200K | 1996 | Contract termination costs; ^{1,2} BEST ESTIMATE due to varying contract types and termination dates. See explanation note below. |
| | \$ 4,700K | 1997 | |
| | \$ 1,000K | 1998 | |
| 2. | \$ 8,919K | 1999 | Depreciation of Capital Equipment; Assumed constant after FY99 |
| 3. | \$ 15K | 1996 | Close Library, pack & ship books and periodicals to NSWC, Philadelphia |

Note: Termination costs are based upon total contracting load executed by the Supply Department (excludes NAVFAC based contracts) for Annapolis in FY94. Assumes termination of contracts for convenience of the government and a 5% escalation per year. Termination fees calculated per 100% for firm fixed price contracts; 5% for cost/time reimbursable and material services contracts; and 3% for value of indefinite delivery/quantity contracts. All costs reflect an estimated contracting load of Post BRAC 91 Annapolis functions and a phasing out over the period of the operational functions of the site. Please see Response #DJD 03 of 30 Nov 94 for a comparison between Scenario 35 and 35A.

¹See Attachment II, DJD 03, Question 1.

²See Attachment II, DJD 013, Questions 1, 2.

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Enclosure (2) - LOSING BASE QUESTIONS

b. Other One-Time Unique Savings. Identify any other one-time unique savings at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). Examples include net proceeds to DoD resulting from an existing MOU with a state or local government, one-time environmental compliance cost avoidances, etc. This area should not be used to identify routine moving or personnel savings, which are calculated automatically by the COBRA algorithms. Do not include Construction Cost Avoidances (which were identified in a separate data call), or Procurement Cost Avoidances (which are covered under item i. below). For each savings, identify the amount, year in which it will occur and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. Do not double count any savings identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC-Annapolis

<u>Cost</u>	<u>FY</u>	<u>Description</u>
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None		
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BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

c. One-Time Unique Moving Costs. The COBRA algorithms use standard packing and shipping rates to calculate the cost of transporting equipment and vehicles. Identify here only those unique moving costs associated with movements out of the losing base that would be incurred in addition to standard packing and shipping costs associated with tonnage and vehicles identified in Table 2-B. Examples of unique moving costs include packing, special handling or recalibration of specialized laboratory or industrial equipment; movement of special materials, etc. If unique costs identified here include packing and shipping costs, then ensure that tonnage for this "unique" equipment is not included under the Mission and Support equipment identified in Table 2-B. For each cost included in the table above, identify the amount, year in which the cost will be incurred, the name of the gaining base and a brief description of the cost.

Losing Base: NSWC-Annapolis

Cost ¹ (\$K)	FY	Gaining Base	Description
1. \$5000K	97	NSWC-White Oak	Disassembly of Magnetic Fields Laboratory equipment and sensors and reassembly and calibration.
2. \$10000K	96-98	NSWC-Philadelphia	Disassembly of the Advanced Propulsion Machinery Facility and reassemble and calibration.
3. \$4900K	97	NSWC-Philadelphia	Disassembly of Machinery Acoustic Silencing Laboratory and reassembly and calibration.
4. \$2200K	96-97	NSWC-Philadelphia	Disassembly of Advanced Shipboard Auxiliary Machinery Facilities and reassembly and calibration.
5. \$2300K	97	NSWC-Philadelphia	Disassembly of the Advanced Electric Propulsion Development Facility and reassembly and calibration.
6. \$3000K	97	NSWC-Philadelphia	Disassembly of the Electric Power Technology Facility and reassembly and calibration
7. \$2000K	96	NSWC-Philadelphia	Disassembly of the Pulsed Power Facility and reassembly and calibration
8. \$1100K	97	Annapolis, MD	Move all Joint Spectrum Center Property, including installation and certification of the main frame computer.
9. \$ 25K	97	NSWC-Carderock	Move the Thermal Spray System Facility and recalibrate the system.
10. \$ 25K	97	NSWC-Carderock	Move the Polyurethane Processor Facility and recalibrate the system.
11. \$ 100K	97	NSWC-Carderock	Move the Reactive Metals Spray Forming Facilities and recalibrate the systems.

Note: Joint Spectrum, a non-DoN tenant activity, is being moved to leased space at Annapolis, MD.

¹See Attachment II, DJD 019, Question 1.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

d. and e. Changes in Mission Costs. Items d. and e. should be used to identify those changes in mission costs that result from the closure/realignment action, but are not counted elsewhere in this data call response or COBRA algorithms. For example, **do not include** changes in non-payroll Base Operating Support (BOS), Family Housing Operations, housing allowances, CHAMPUS costs/savings, or salary savings for eliminated positions/billets, all of which are calculated by other COBRA algorithms. Examples of items to include here are changes in operating costs due to the transfer of workload to gaining bases, economies of scale, changes in travel requirements, differences in wage grade labor rates or locality pay differentials, changes in the amount of mission work performed on contract, and changes in utility requirements or ADP/telecommunications costs not included in responses provided in the Base Operating Support tables of Data Call 66.

For purposes of calculating changes in costs associated with the transfer of mission workload from a losing to a gaining base, the following information is provided below. Calculations should take into consideration both economies of scale and differences in operating costs. Remember, any salary savings resulting from eliminated military billets and/or civilian positions must be identified as a number of billets/positions eliminated in Table 2-C. **Do not include** basic salary and fringe benefit savings associated with billets/positions identified as eliminated on Table 2-C. Also, **do not identify** changes in the non-payroll BOS Costs (including non-payroll G&A for DBOF activities) reported in Data Call 66.

First, identify economies of scale by examining the historic pattern of how labor, overhead and other costs vary with workload volume (adjust prior year costs for inflation to make them comparable; use statistical tests to determine the type of relationship that exists). The relationship between costs and workload can then be used to estimate changes in labor and overhead rates which result from the projected change in workload. Economies of scale benefits will generally accrue to gaining bases on an incremental basis, as the workload ramps up, and will remain in future years after all workload is transitioned.

Second, calculate resulting changes in operating costs. Changes in operating costs should be calculated by pricing out direct labor manhours of work, using the projected labor and productive overhead rates (which have been adjusted to take into consideration economies of scale resulting from the workload transfer) for both the losing and gaining base. The difference in total costs associated with the workload transition is then identified as the net change in mission costs. Relative differences in the numbers of hours required to complete a project at the losing base and gaining base(s) should be taken into consideration, if identifiable. Also, include contract costs in this analysis, but unless cost changes are identifiable, assume that contract price rates will remain constant.

If a net change in mission costs is included in the data call response, the response must also include supporting data to show calculations and methodology used to estimate this

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

change in costs. Furthermore, data used in these calculations must be consistent with previously submitted certified data.

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Enclosure (2) - LOSING BASE QUESTIONS

d. **Net Mission Costs.** Complete the following worksheet to identify any net recurring increases in mission costs associated with the closure/realignment of the losing base and/or transfer of workload to gaining bases. For each net cost increase, identify the name of the gaining base where the workload will be transferred (if applicable), cost increases by year and describe the nature of the cost increase. If this worksheet is filled in, provide supporting data to show calculations and methodology used to estimate these cost increases.

Net Mission Costs (Cost Increases) Worksheet						
Losing Base: NSWC-Annapolis						
Gaining Base	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001 and Beyond
1. None	Significant					
Description: Non-CFC Air Conditioning; see below.						
2.						
Description:						

Add additional lines to worksheet as necessary.

MISSION COST IMPLICATIONS OF EARLY TERMINATION OF NON-CFC¹ AIR CONDITION R&D

The Air Conditioning and Refrigeration CFC elimination R&D program is scheduled to complete R&D for CFC-12 AC plants in FY94, for CFC-12 refrigeration plants in FY95 and for CFC-114 plants in FY 2002. The program is using all means available to accommodate production bans beginning in FY95 including maximum stockpiling and a substantial R&D program. The quantities of CFC's in reserve are based on an aggressive conversion schedule which is in turn based on an aggressive R&D schedule. Terminating the R&D program in 1998 will compromise the CFC-114 conversion schedule, which delays fleet implementation, which depletes reserve stockpile, prior to the availability of replacement fluids, which means that ships will not have the required cooling power to operate combat systems and other critical cooling needs. In addition, the Navy's needs for CFC's are driven by leak rates which will result in fines of up to \$25,000 per day. **The CFC-114 units affected by early termination are associated with SSN-688, SSN-726, SSN-21, DDG-51, CG-47, DD-963, DDG-993,**

¹See Attachment II, DJD 08, 014, 016, 017, 021, 023, 024.

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Enclosure (2) - LOSING BASE QUESTIONS

DDG-993, LHD-1, LHA-1, AOE-6, and AS-39/AD-41, and could produce fines on the order of tens of millions of dollars per day.

e. Net Mission Savings. Complete the following worksheet to identify any net recurring decreases in mission costs associated with the closure/realignment of the losing base and/or transfer of workload to gaining bases. For each net cost decreases, identify the name of the gaining base where the workload will be transferred (if applicable), cost decreases by year and describe the nature of the cost decrease. If this worksheet is filled in, provide supporting data to show calculations and methodology used to estimate these cost decreases.

Net Mission Savings (Cost Decreases) Worksheet						
Losing Base: NSWC-Annapolis						
Gaining Base	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001 and Beyond
1. None						
Description:						
2.						
Description:						

Add additional lines to worksheet as necessary.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

f. Miscellaneous Recurring Costs. Identify any other recurring costs at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section), e.g., new leases of facilities or equipment, etc. For each cost, identify the amount, year in which the cost will begin and describe the nature of the cost. Only costs directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances or CHAMPUS costs, all of which are calculated by other COBRA algorithms.) Do not double count changes in Mission costs shown above. Do not double count any costs identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC-Annapolis

	<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>
1.	255 K	97	Mothball ¹ cost for Deep ocean Pressure Facility (See Note 1)
2.	331 K	97	Additional travel costs ²

Note 1: The recurring annual costs for the Deep Ocean Pressure Facility provides for basic services (environmental controls). The environmental controls are required to maintain the future certifiability of this high pressure tank system. These environmental controls consist of maintaining facility temperature sufficiently above the freezing point of water in the Winter to preclude the possibility of damage due to the expansion of frozen water, purging of and placing a nitrogen blanket in the gaseous portions of the system to prevent possibility of corrosion within the pipes, and control of humidity throughout the facility to control the rate of corrosion on the exterior portions of the facility. The cost was obtained from a proportionate allocation of cost to retain in a "reserve" status from the Detailed Inventory of Naval Shore Facilities (NAVFAC P-164). The "reserve" category in NAVFAC P-164 Detailed Inventory of Naval Shore Facilities, is the same as "moth ball", i.e. it is the category between "standby" and "abandon".

Note 2: These recurring annual costs account for the additional direct travel to/from Carderock/Washington, DC area incurred by personnel relocated from Annapolis to Philadelphia. This relocation increases the average round trip from 80-100 miles to approximately 300 miles. Accounting for additional non-productive time would add a further annual cost of \$398 K. For simplicity, it is assumed that these costs begin in FY 97 and remain stable thereafter.

g. Miscellaneous Recurring Savings. Identify any other recurring savings at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section), e.g., elimination of leases of facilities or equipment, etc. For the savings, identify the amount, year in which each will begin and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances, CHAMPUS costs or salary savings for eliminated positions/billets, all of which are calculated by other COBRA algorithms.) Do not double count changes in Mission Costs shown above. Do not double count any savings identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC-Annapolis

<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
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1. None		
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¹See Attachment II, DJD 04, 015.

²See Attachment II, DJD 09, Question 3.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

h. Land Sales. Identify any proceeds, if identifiable and realistically expected to be received, which would be realized through the sale of excessed property at the losing base(s). In most cases, proceeds will not be realized from the sale of land at closed activities. However, if unusual circumstances warrant, identify estimated amount of proceeds, number of acres to be sold and rationale for assuming that proceeds will be obtained.

Losing Base: NSWC-Annapolis

<u>Revenues</u>	<u>No. of Acres</u>	<u>Rationale</u>
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1. None

i. Procurement Cost Avoidances. Identify any procurement cost avoidances which would be realized as a result of the closure/realignment scenario. Items identified here must not include any funds, regardless of appropriation, identified as BOS costs in Data Call 66. An example of a cost to include here would be a planned "Other Procurement account" purchase of a computer system, which will no longer be required as a result of the closure/realignment action. For each cost avoidance, identify the amount, year in which the cost would have been incurred, whether the cost avoidance is one-time or recurring in nature, and the nature of the cost avoidance.

Losing Base: NSWC-Annapolis

<u>Cost</u>	<u>FY</u>	<u>One-Time/Recurring</u>	<u>Explanation</u>
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1. None

j. Facility Shutdown. If an activity is being realigned but not completely closed, then identify the number of square feet of Class 2 real property (buildings), excluding family housing, MWR and utilities facilities, which will be shut down at the losing base as a result of this action. If an activity is being completely closed, then just enter "All". The Base Loading Data Attachment includes an identification of total square feet for the activity and should be referred to in answering this question. Note that this entry should be shown in "thousands of square feet" (KSF).

Losing Base: NSWC-Annapolis

Facility KSF Shutdown: 598 KSF¹

¹See Attachment II, DJD 09, Question 1.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

- Note1: Attachment 1: Base Loading Data for Scenario 3-20-0198-035 shows a value of zero (0) for Total Facility Square Footage. The correct figure is 629 KSQFT.
- Note 2: Nike Site accounts for 10 KSF of lost facilities

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

Summarize data shown in response to supporting data questions a. through j. above in the following table. Note that all entries must be shown in (\$000).

Table 2-F(1)Dynamic Base Information Summary

Losing Base: NSWC-Annapolis								
		1996	1997	1998	1999	2000	2001	Total
a.	One-Time Unique Costs	11,215 ¹	4,700	1,000	8,919	0	0	25,834
b.	One-Time Unique Svgs	0	0	0	0	0	0	0
c.	One-Time Move Costs	6,000	19,650	5,000	0	0	0	30,650
d.	Net Mission Costs	0	0	0	0	0	0	0
e.	Net Mission Savings	0	0	0	0	0	0	0
f.	Misc Recur Costs ^{Note 2}	0	586 <small>Note 1,3</small>	0	0	0	0	586
g.	Misc Recur Savings	0	0	0	0	0	0	0
h.	Land Sales	0	0	0	0	0	0	0
i.	Procurement Cost Avoid	0	0	0	0	0	0	0
j. Fac. Shutdown (KSF)		598 ²						

Note 1: "Miscellaneous Recurring Costs" provide for the Deep Ocean Facility moth ball costs.

Note 2: Miscellaneous recurring costs are entered for the first year of occurrence per COBRA instructions.

Note 3: Miscellaneous additional costs for recurring travel from Philadelphia to Washington.

¹See Attachment II, DJD 020.

²See Attachment II, DJD 09.

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Complete a separate Enclosure (3) - Gaining Base Questions, as appropriate, for each "gaining" base involved in the closure/realignment scenario. Make additional copies of this enclosure as necessary. Tables included in this enclosure are 3-A and 3-B. Enter the name of the Gaining Base in the block below.

Gaining Base:	NSWC-PHILADELPHIA
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Table 3-A - Dynamic Base Information. Complete the following "Supporting Data" section. Then, summarize this data in the Summary Data Table (3-A) that immediately follows this "Supporting Data" section. Show all entries in (\$000).

Table 3-A: Supporting Data

a. Other One-Time Unique Costs. This item has been divided into two sections. First, separately identify any Community Infrastructure Impact costs. Second, separately identify any other One-Time Unique costs. **Finally, when transferring these figures to the Summary Data Table (3-A), combine both sets of numbers into one "Other One-Time Unique Costs" answer (by year).**

a. (1) Community Infrastructure Impacts. Identify any cost impacts on community infrastructure at gaining bases which would result from the transfer of functions/personnel, e.g., requirement to build new sewage treatment facility, etc. For each cost, identify the amount, year in which it would be incurred, location (city, etc.), and a brief description of the requirement. Answers must be consistent with certified data contained in the gaining base's Data Call 65, "Economic and Community Infrastructure Data", response. Ensure that adequate coordination takes place, especially in those cases where the gaining and losing base are in different claimancies. **Remember to aggregate this answer with 2.a.(2) costs on the next page, if any, when transferring data to Summary Table.**

Gaining Base: **NSWC-PHILADELPHIA**

	<u>Cost</u>	<u>FY</u>	<u>Location</u>	<u>Description</u>
1.	NONE			

NOTE: There will be no community infrastructure impact. The City of Philadelphia and the surrounding major metropolitan area can absorb the increase in personnel from losing base (NSWC Annapolis) without impact.

Annapolis Site
Scenario 3-20-0198-035A

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS

a. (2) Other Unique One-Time Costs. Identify any other one-time unique costs at the gaining base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). Examples include use of temporary office space, etc. Only costs directly attributable to the closure/realignment action should be identified. This area should not be used to identify routine moving or personnel costs, which are calculated automatically by the COBRA algorithms, nor should it be used to identify one-time unique moving costs which will be addressed in the Losing Base tables (enclosure (2)). For each unique one-time cost, identify the amount, year in which the cost will be incurred and describe the nature of the cost. Do not double count any costs identified on Losing Base tables (Enclosure (2)). Remember to aggregate with 2.a.(1) costs on the previous page, if any, when transferring data to Summary Table.

Gaining Base: **NSWC-PHILADELPHIA**

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	\$21.4K	96	107 people @\$200/person
	\$28.0K	97	140 people @\$200/person
	\$ 2.8K	98	14 people @\$200/person
	<hr/> \$52.2K		<hr/> 261

Personnel from losing base can be accommodated by NSWC-PHILADELPHIA.

Note: NSWC-Philadelphia is consolidating personnel into larger and fewer buildings as a result of past BRAC actions. The largest building, being vacated by PNSY as a BRAC'91 action, will house personnel from excessed portions of the Naval Station and allows closure and disposal of several NSWC-Philadelphia buildings. Costs for these actions are covered by previous BRAC decisions. As a result of these consolidations, NSWC-Philadelphia will have 350 excess office working spaces that were intended to be laid up. Costs to continue using these spaces consists of phone and computer hookup, furniture relocation and space cleanup.

Note: \$200/person up to 350 people (phone, computer hookup/space cleanup/systems furniture relocation).

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

	<u>Cost¹</u>	<u>FY</u>	<u>Description</u>
2.	25K	96	Advanced Propulsion Machinery Facility
	100K	97	Machinery Acoustics Silencing Laboratory
	50K	96	Advanced Shipboard Auxiliary Machinery Facilities
	40K	97	Advanced Electric Propulsion Development Facility
	50K	97	Electric Power Technology Facility
	50K	96	Pulsed Power Facility
	5K	97	Sea Survival (NIKE)
	<u>320K</u>	<u>96-97</u>	<u>Total</u>

Notes: NSWC-Philadelphia's existing plant infrastructure is designed for low cost and rapid change out of test facilities. Utilities such as electrical power, cooling water, air and fuel are available throughout the test buildings. Foundations are specially reinforced with unique "T-block" design to accommodate different footprints of equipment. Space is available to accommodate the facilities in question. Input to this scenario were coordinated between the losing and gaining activities. The losing activity estimates include movement and reconstruction of the test facilities at the gaining activity including: lay-up, removal, packing, shipping, unpacking, installation, alignment and preparation testing of the facility. Special requirements (such as acoustic foundations) are included with losing site estimates. Gaining sites estimates include clean out of the site, removal of existing equipment and tie in of utilities to the site. One site, the Machinery Acoustic Silencing Laboratory, will require retention of a building being closed by BRAC'91. Costs for maintenance and repair, fire protection, security utilities, trash removal and other miscellaneous costs are included in paragraph (d).

b. Other One-Time Unique Savings. Identify any other one-time unique savings at the gaining base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). This area should not be used to identify routine moving or personnel savings, which are calculated automatically by the COBRA algorithms. Do not include MILCON Cost Avoidances (which were identified in a separate data call), or Procurement Cost Avoidances (which are covered in the losing base enclosure). For each savings, identify the amount, year in which it will occur and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. Do not double count any savings identified on Losing Base tables (Enclosure (2)).

¹See Attachment II, DJD 019, Question 1.

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Gaining Base: NSWC-PHILADELPHIA

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	NONE		

c. Environmental Mitigation. Environmental cleanup costs at closing bases are not considered in COBRA, since these costs will be incurred regardless of whether the activity is closed or remains opened. If, however, additional environmental costs are incurred at gaining bases as the result of a transfer of functions or personnel, these costs should be identified, e.g., wetland mitigation, environmental impact statements at gaining bases, new permits, etc. Identify below any non-Military Construction environmental mitigation costs which will be incurred as a result of this closure/realignment action. (Note: Military Construction Costs for environmental mitigation are identified in Table 3-B). For each cost, identify the amount, year in which the cost will be incurred and a brief description of the cost.

Gaining Base: NSWC-PHILADELPHIA

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	NONE		

d. Miscellaneous Recurring Costs. Identify any other recurring costs associated with the closure/realignment action at the gaining base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section), e.g., new leases of facilities or equipment, etc. For each cost, identify the year in which the cost will begin and describe the nature of the cost. Only costs directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances or CHAMPUS costs, all of which are calculated by other COBRA algorithms.). Do not double count any costs identified on Losing Base tables (Enclosure (2)).

Gaining Base: NSWC-PHILADELPHIA

	<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>
1.	\$380K ¹	97	Maintenance and repair, fire protection, utility and other miscellaneous costs of a building previously closed by BRAC'91.

¹See Attachment II, DJD 019, Questions 2a, 2b.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS

e. Miscellaneous Recurring Savings. Identify any other recurring savings associated with the closure/realignment action which will not be calculated automatically by the model, e.g., elimination of leases of facilities or equipment, etc. For the savings, identify the year in which each will begin and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances, CHAMPUS costs or salary savings for eliminated positions/billets, all of which are calculated by other COBRA algorithms.). Do not double count any savings identified on Losing Base tables (Enclosure (2)).

Gaining Base: **NSWC-PHILADELPHIA**

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	NONE		

f. Land Purchases. Identify any land purchases required at gaining bases to accommodate relocating activities/functions. Identify the cost, number of acres, year in which purchase will occur and a brief description identifying why the land needs to be purchased.

Gaining Base: **NSWC-PHILADELPHIA**

	<u>Cost</u>	<u>No. of Acres</u>	<u>FY</u>	<u>Description</u>
1.	NONE			

Summarize data shown in response to supporting data questions a. through f. above in the following table:

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Table 3-A: Dynamic Base Information

Gaining Base Name: NSWC-PHILADELPHIA								
		1996	1997	1998	1999	2000	2001	Total
a	One-Time Unique Costs *	146.4 ¹	223 ¹	2.8 ¹	0	0	0	372.2
b	One-Time Unique Savings	0	0	0	0	0	0	0
c	Environ. Mitigation	0	0	0	0	0	0	0
d	Misc. Recurring Costs ²	0	380	0	0	0	0	380
e	Misc. Recurring Savings	0	0	0	0	0	0	0
f	Land Purchases	0	0	0	0	0	0	0

* Includes both Community Infrastructure Impact and Other One-Time Unique Costs, as applicable.

Note 1: In addition to the costs on page 3-3, there is a one-time moving cost of: \$200/person up to 350 people (phone, computer hookup/space cleanup/systems furniture relocation),

Note 2: Miscellaneous recurring costs are listed only for the first year of occurrence, per COBRA instructions.

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Table 3-B - Military Construction Requirements. Identify the amount of new construction or rehabilitation (using the designated unit of measure) which will be required at the receiving site. Include a brief description of the requirement in the Comment column.

- Do not include Family Housing construction requirements on this table, they will be identified on a separate data call format.
- The COBRA MILCON algorithm will estimate the cost of MILCON requirements for the standard categories of construction listed on the next page. However, if an engineered estimate(s) is already available, then a dollar value for the requirement(s) should be identified in the "Comment" column of the table.
- Any identified Environmental Mitigation MILCON projects must include a total cost and brief description of the requirement in the "Comment" column of the table.
- The "Other" row is provided to identify MILCON requirements which do not fit the standard construction categories, e.g., dry docks, SCIF conversions, aircraft wash racks, etc. Enter a total cost and brief description for each identified requirement. For these "unique" categories of construction, a square footage estimate should also be indicated, if possible.

For Rehabilitation Requirements: if entered as a "unit of measure" (e.g., SF, etc.), then corresponding costs will be calculated at 75% of the cost of new construction (worst-case cost estimate for rehabilitation costs). If the rehabilitation will involve renovation at an anticipated rate of less than 75%, then in addition to identifying the requirement (SF, etc.), enter in the Comment block either a rehabilitation cost or an appropriate percentage which should be used in lieu of the 75% rate. Show any cost entries in (\$000).

Description of "Units of Measure" used in Table 3-B:

SY - Square Yards
FB - Feet of Berthing
SF - Square Feet
BL - Barrels

Description of standard "Categories of Construction" used in Table 3-B (including examples of types of construction included in these categories):

Horizontal - Aprons/Paving (Aircraft Parking Aprons, Combat Aircraft Ordnance Loading Areas, etc.), shown in square yards.

Berthing - General Purpose Berthing Piers, shown in feet of berthing.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS

Air Maintenance - Maintenance Hangers (General Purpose, High Bay, etc.), shown in square feet.

Other Operations - General Purpose Operations Facilities (Aircraft, Ordnance, Amphibious, Headquarters, etc.), shown in square feet.

Administrative - Administrative space (General Purpose and ADP), shown in square feet.

Training - Training Facilities (Academic, Reserve, Applied Instruction, Recruit Processing, Operational Trainers, etc.), shown in square feet.

Maintenance - Non-Weapons facilities (Vehicles, Electronics, Public Works, etc.), shown in square feet.

Bachelor Quarters - Barracks, Dormitories or Unmarked Officer Quarters, shown in square feet.

Supply/Storage - Operational Storage, Cold Storage, General Warehouse, etc., shown in square feet.

Dining Facilities - Enlisted Mess Hall, shown in square feet.

Personnel Support - Fire, Police, Family Service Centers, MWR, Child Care, etc., shown in square feet.

Communications - Other Communications Facilities, (Communications Centers, Telephone Exchanges, Terminal Equipment, Radar Air Traffic Control Center, etc.), shown in square feet.

Ship Maintenance - Shore Intermediate Maintenance, Waterfront Services, Amphibian Vehicle Maintenance, etc., shown in square feet.

RDT&E - Other Research, Development, Test and Evaluation (RDT&E) facilities (Aircraft, Ship, Underwater, Electronics, etc.) (does not include Ammo/Propulsion Labs), shown in square feet.

POL Storage - Jet Engine Fuel Storage, shown in barrels.

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Ammo Storage - General Purpose, High Explosive, Small Arms and Missile Magazines, shown in square feet.

Medical Facilities - Hospitals, Medical/Dental Clinics, etc., shown in square feet.

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
NSWC PHILADELPHIA SUBMISSION (3-20-0198-035A)
ENCLOSURE (3) - GAINING BASE QUESTIONS**

Table 3-B: MILCON Requirements

Gaining Base Name: NSWC-PHILADELPHIA			
Category (Unit)	New Construction Requirement	Rehabilitation Requirement	Comment
Horizontal (SY)	0	0	NONE
Berthing (FB)	0	0	NONE
Air Maintenance (SF)	0	0	NONE
Other Operations (SF)	0	0	NONE
Administrative (SF)	0	0	NONE
Training (SF)	0	0	NONE
Maintenance (SF)	0	0	NONE
Bachelor Quarters (SF)	0	0	NONE
Supply/Storage (SF)	0	0	NONE
Dining Facilities (SF)	0	0	NONE
Personnel Support (SF)	0	0	NONE
Communications (SF)	0	0	NONE
Ship Maintenance (SF)	0	0	NONE
RDT&E (SF)	0	0	NONE
POL Storage (BL)	0	0	NONE
Ammo Storage (SF)	0	0	NONE
Medical Facilities (SF)	0	0	NONE
Environmental	\$ 0	\$ 0	NONE
Other:	0	0	NONE
-	\$	\$	
-	\$	\$	
-	\$	\$	

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

CAPT HARRY J. RUCKER, USN
NAME (Please type or print)


Signature

COMMANDING OFFICER
Title

27 January 1995
Date

NSWC PHILADELPHIA
Activity

This certification covers NSWC Philadelphia Enclosure (3) to the NSWC/Carderock Division/Annapolis Detachment Response to the BRAC Scenario 3-20-0198-035A.

Gaining Base:	NSWC CARDEROCK
----------------------	-----------------------

Table 3-A (2): Supporting Data

a. Other One-Time Unique Costs.

a. (1) Community Infrastructure Impacts.

	<u>Cost</u>	<u>FY</u>	<u>Location</u>	<u>Description</u>
1.	None			

a. (2) Other Unique One-Time Costs.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

b. Other One-Time Unique Savings.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

c. Environmental Mitigation.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	\$125K	96	Environmental Impact Assessment

d. Miscellaneous Recurring Costs.

	<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

e. Miscellaneous Recurring Savings.

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	None		

f. Land Purchases.

	<u>Cost</u>	<u>No. of Acres</u>	<u>FY</u>	<u>Description</u>
1.	None			

Table 3-A (2): Dynamic Base Information

Gaining Base Name: NSWC CARDEROCK								
		1996	1997	1998	1999	2000	2001	Total
a	One-Time Unique Costs	0	0	0	0	0	0	0
b	One-Time Unique Savings	0	0	0	0	0	0	0
c	Environ. Mitigation	125	0	0	0	0	0	125
d	Misc. Recurring Costs	0	0	0	0	0	0	0
e	Misc. Recurring Savings	0	0	0	0	0	0	0
f	Land Purchases	0	0	0	0	0	0	0

Table 3-B (2): MILCON Requirements

Gaining Base Name: NSWC CARDEROCK			
Category (Unit)	New Construction Requirement	Rehabilitation Requirement	Comment
Horizontal (SY)	0	0	NONE
Berthing (FB)	0	0	NONE
Air Maintenance (SF)	0	0	NONE
Other Operations (SF)	0	0	NONE
Administrative (SF)	0	0	NONE
Training (SF)	0	0	NONE
Maintenance (SF)	0	0	NONE
Bachelor Quarters (SF)	0	0	NONE
Supply/Storage (SF)	0	0	NONE
Dining Facilities (SF)	0	0	NONE
Personnel Support (SF)	0	0	NONE
Communications (SF)	0	0	NONE
Ship Maintenance (SF)	0	0	NONE
RDT&E (SF)	10,000	0	See Note 1
POL Storage (BL)	0	0	NONE
Ammo Storage (SF)	0	0	NONE
Medical Facilities (SF)	0	0	NONE
Environmental	\$ 0	\$ 0	NONE
Other: MILCON	\$1,000	\$ 0	See Note 2

Note 1: The BRAC-91 process created the Naval Surface Warfare Center and realigned the David Taylor Research Center into the Carderock Division. Functional responsibility for the NIKE Site migrates to the Carderock Site with the relocation of the Survivability, Structures, and Materials Directorate (formerly the Ship Materials Engineering Department) and its related facilities.

Note 2: Thermal Spray Process (\$350K); Reactive Metal Spray Forming Building (\$400K); Polyurethane Processing Building (\$250K)

**Annapolis Site
Scenario 3-20-0198-035A**

**UIC 61533
6 Dec 1994
Enclosure (3)**

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

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I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

James E. Baskerville; Captain USN
NAME (Please type or print)

Commander
Title

Carderock Division; NSWC
Activity


Signature

27 January 1995
Date

This certification covers NSWC Carderock Site Enclosure (3) to the NSWC/Carderock Division/Annapolis Detachment Response to the BRAC Scenario 3-20-0198-035A.

Gaining Base:	NSWC WHITE OAK
----------------------	-----------------------

Table 3-A (3): Supporting Data

a. Other One-Time Unique Costs.

a. (1) Community Infrastructure Impacts.

	<u>Cost</u>	<u>FY</u>	<u>Location</u>	<u>Description</u>
1.	None			

a. (2) Other Unique One-Time Costs.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None:		Installation and minor alterations included in losing site cost estimate.

b. Other One-Time Unique Savings.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

c. Environmental Mitigation.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

d. Miscellaneous Recurring Costs.

	<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

e. Miscellaneous Recurring Savings.

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	None		

f. Land Purchases.

	<u>Cost</u>	<u>No. of Acres</u>	<u>FY</u>	<u>Description</u>
1.	None			

Table 3-A (3): Dynamic Base Information

Gaining Base Name: NSWC WHITE OAK								
		1996	1997	1998	1999	2000	2001	Total
a	One-Time Unique Costs	0	0	0	0	0	0	0
b	One-Time Unique Savings	0	0	0	0	0	0	0
c	Environ. Mitigation	0	0	0	0	0	0	0
d	Misc. Recurring Costs	0	0	0	0	0	0	0
e	Misc. Recurring Savings	0	0	0	0	0	0	0
f	Land Purchases	0	0	0	0	0	0	0

Table 3-B (3): MILCON Requirements

Gaining Base Name: NSWC WHITE OAK			
Category (Unit)	New Construction Requirement	Rehabilitation Requirement	Comment
Horizontal (SY)	0	0	NONE
Berthing (FB)	0	0	NONE
Air Maintenance (SF)	0	0	NONE
Other Operations (SF)	0	0	NONE
Administrative (SF)	0	0	NONE
Training (SF)	0	0	NONE
Maintenance (SF)	0	0	NONE
Bachelor Quarters (SF)	0	0	NONE
Supply/Storage (SF)	0	0	NONE
Dining Facilities (SF)	0	0	NONE
Personnel Support (SF)	0	0	NONE
Communications (SF)	0	0	NONE
Ship Maintenance (SF)	0	0	NONE
RDT&E (SF)	0	0	NONE
POL Storage (BL)	0	0	NONE
Ammo Storage (SF)	0	0	NONE
Medical Facilities (SF)	0	0	NONE
Environmental	\$ 0	\$ 0	NONE
Other:	0	0	NONE
-	\$	\$	
-	\$	\$	
-	\$	\$	

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

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I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

JAMES S. PERRY, CAPT, USN

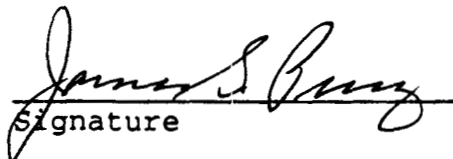
NAME (Please type of print)

OFFICER IN CHARGE

Title

WHITE OAK DETACHMENT
DAHLGREN DIVISION

Activity NAVAL SURFACE WARFARE CENTER


Signature

1/27/95

Date

Gaining Base:	NAVAL RESEARCH LABORATORY CHESAPEAKE BEACH DETACHMENT
----------------------	--

Table 3-A (4): Supporting Data

a. Other One-Time Unique Costs.

a. (1) Community Infrastructure Impacts.

	<u>Cost</u>	<u>FY</u>	<u>Location</u>	<u>Description</u>
1.	None			

a. (2) Other Unique One-Time Costs.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	\$100K	97	Miscellaneous permits, environmental control and installation costs

b. Other One-Time Unique Savings.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

c. Environmental Mitigation.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

d. Miscellaneous Recurring Costs.

	<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

e. Miscellaneous Recurring Savings.

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	None		

f. Land Purchases.

	<u>Cost</u>	<u>No. of Acres</u>	<u>FY</u>	<u>Description</u>
1.	None			

Table 3-A (4): Dynamic Base Information

Gaining Base Name: NAVAL RESEARCH LABORATORY CHESAPEAKE BEACH DETACHMENT								
		1996	1997	1998	1999	2000	2001	Total
a	One-Time Unique Costs	0	100	0	0	0	0	100
b	One-Time Unique Savings	0	0	0	0	0	0	0
c	Environ. Mitigation	0	0	0	0	0	0	0
d	Misc. Recurring Costs	0	0	0	0	0	0	0
e	Misc. Recurring Savings	0	0	0	0	0	0	0
f	Land Purchases	0	0	0	0	0	0	0

Table 3-B (4): MILCON Requirements

Gaining Base Name: NAVAL RESEARCH LABORATORY CHESAPEAKE BEACH DETACHMENT			
Category (Unit)	New Construction Requirement	Rehabilitation Requirement	Comment
Horizontal (SY)	0	0	NONE
Berthing (FB)	0	0	NONE
Air Maintenance (SF)	0	0	NONE
Other Operations (SF)	0	0	NONE
Administrative (SF)	0	0	NONE
Training (SF)	0	0	NONE
Maintenance (SF)	0	0	NONE
Bachelor Quarters (SF)	0	0	NONE
Supply/Storage (SF)	0	0	NONE
Dining Facilities (SF)	0	0	NONE
Personnel Support (SF)	0	0	NONE
Communications (SF)	0	0	NONE
Ship Maintenance (SF)	0	0	NONE
RDT&E (SF)	0	0	NONE
POL Storage (BL)	0	0	NONE
Ammo Storage (SF)	0	0	NONE
Medical Facilities (SF)	0	0	NONE
Environmental	\$ 0	\$ 0	NONE
Other:	0	0	NONE
-	\$	\$	
-	\$	\$	
-	\$	\$	

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

Dr JAMES S MURPHY
NAME (Please type or print)

SUPERINTENDENT
Title

CHEMISTRY SCIENCE & COMPONENT TECHNOLOGY
Division

MATERIALS
Department

NAVAL RESEARCH LAB
Activity

James S. Murphy
Signature
19 Nov 1994
Date

Gaining Base:	ANNAPOLIS, MD - LEASED SPACE
----------------------	-------------------------------------

Table 3-A (5): Supporting Data

a. Other One-Time Unique Costs.

a. (1) Community Infrastructure Impacts.

	<u>Cost</u>	<u>FY</u>	<u>Location</u>	<u>Description</u>
1.	None			

a. (2) Other Unique One-Time Costs.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

b. Other One-Time Unique Savings.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

c. Environmental Mitigation.

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

d. Miscellaneous Recurring Costs.

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	\$1,000K	97	These costs accomodates the Joint Spectrum Center (a non-DoN Command). The \$1M recurring cost is for the 134 Joint Spectrum Center employees to be housed in a co-located site with the approximately 700 contractor personnel already at the ADM Cochran Blve site in Annapolis. The recurring \$1M does not include any costs for the 700 personnel already located off the NSWC-Annapolis site.

e. Miscellaneous Recurring Savings.

	<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1.	None		

f. Land Purchases.

	<u>Cost</u>	<u>No. of Acres</u>	<u>FY</u>	<u>Description</u>
1.	None			

Table 3-A (5): Dynamic Base Information

Gaining Base Name: ANNAPOLIS, MD - LEASED SPACE								
		1996	1997	1998	1999	2000	2001	Total
a	One-Time Unique Costs	0	0	0	0	0	0	0
b	One-Time Unique Savings	0	0	0	0	0	0	0
c	Environ. Mitigation	0	0	0	0	0	0	0
d	Misc. Recurring Costs	0	1,000	0	0	0	0	1,000
e	Misc. Recurring Savings	0	0	0	0	0	0	0
f	Land Purchases	0	0	0	0	0	0	0

Note: The "Annapolis, MD-Leased Space" recurring costs are discussed in Paragraph 2.F on page 2-39

Table 3-B (5): MILCON Requirements

Gaining Base Name: ANNAPOLIS, MD - LEASED SPACE			
Category (Unit)	New Construction Requirement	Rehabilitation Requirement	Comment
Horizontal (SY)	0	0	NONE
Berthing (FB)	0	0	NONE
Air Maintenance (SF)	0	0	NONE
Other Operations (SF)	0	0	NONE
Administrative (SF)	0	0	NONE
Training (SF)	0	0	NONE
Maintenance (SF)	0	0	NONE
Bachelor Quarters (SF)	0	0	NONE
Supply/Storage (SF)	0	0	NONE
Dining Facilities (SF)	0	0	NONE
Personnel Support (SF)	0	0	NONE
Communications (SF)	0	0	NONE
Ship Maintenance (SF)	0	0	NONE
RDT&E (SF)	0	0	NONE
POL Storage (BL)	0	0	NONE
Ammo Storage (SF)	0	0	NONE
Medical Facilities (SF)	0	0	NONE
Environmental	\$ 0	\$ 0	NONE
Other:	0	0	NONE
-	\$	\$	
-	\$	\$	
-	\$	\$	

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

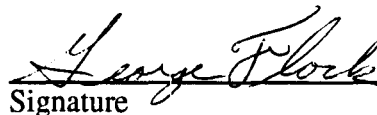
The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

GEORGE FLOCK
NAME (Please type or print)


Signature

Colonel, U.S. Air Force, Commander
Title

25 JAN 1995
Date

Joint Spectrum Center
Activity

BSAT Scenario 3-20-0198-035A

BRAC-95 SCENARIO DEVELOPMENT DATA CALL

ATTACHMENT 1: BASE LOADING DATA

Activity: 61533 NSWC CARDEROCK DIV DET ANNAPOLIS

PART I: MANPOWER DATA - HOST AND TENANTS. This data is provided to assist you in identifying military billets and civilian positions which will either be relocated or eliminated as a result of closure or realignment. Officer (OF), Enlisted (ENL) and Civilian (CIV) numbers reflect end strength, not on-board counts. The "Planned Force Structure Reduction" column represents the difference between projected "Beginning of FY 1996" and projected "End of FY 2001" end strength. The source of this data is the BUPERS/NAVCOMPT/CMC data bases in support of the FY 1996/1997 OSD Submit. Review this list and make any necessary amendments, including the addition or deletion of lines of data to accurately reflect the host and tenant population. Note that Military Students (STU) must be shown as an Average On-Board (AOB) count. If a significant student population is located at the activity, then all students need to be identified in this table. Student data need only be provided for the "End of FY 2001" column of the table. If any numbers are changed, please provide a revised set of totals at the end of the listing.

UIC	NAME	MAJOR CLAIMANT	BEGIN FY 1995				PLANNED FORCE STRUCTURE CHANGES				END FY 2001			
			OFF	ENL	CIV	STU	OFF	ENL	CIV	STU	OFF	ENL	CIV	STU
61533	NSWC CARDEROCK DIV DET	COMNAVSEASYS	2	0	0	0	0 ^{2A}	0	0	0	2 ^{2A}	0	0	0
61533	NSWC CARDEROCK	COMNAVSEASYS	0	0	725	0	0	0	-307	0	0	0	418	0
ADD		TOTALS:	2	0	725	0	-1	0	-307	0	1	0	418	0

↑
NOTE 2

Note 1. The base loading data shown above does not include the Joint Spectrum Center (formerly the Electromagnetic Compatibility Center) a DoD tenant activity at the Annapolis Site. (See Annapolis Data Call #1.)

UIC	NAME	Major Claimant	Begin FY96				Planned Force Structure Change				End FY2001			
			Off	Enl	Civ	Stu	Off	Enl	Civ	Stu	Off	Enl	Civ	Stu
FFGSN0	Joint Spectrum Center	DoD	11	8	115	0	0	0	0	0	11	8	115	0

Note 2. Force Structure change of 307 personnel shown for the Annapolis Detachment consists of a transfer of 294 personnel and related facilities to the NSWC/Carderock Site in FY96 under BRAC 91, and a workload draw-down of 13 personnel at the Annapolis Site between FY 97 and FY 2001.

Note 2A: See Attachment II, DJD 018

BRAC-95 SCENARIO DEV OPMENT DATA CALL

ATTACHMENT 1: BASE LOADING DATA

PART 5: TOTAL FACILITY SQUARE FEET. This is the total Class 2 facility square feet, including family housing, MWR and utilities, as reported in the Naval Facilities Assets Data Base (NFADB). This figure is used in determining the number of square feet which will be "shut down" as a result of the closure action.

Total Facility Square Feet (in thousands): **629**

PART 6: BASE OPERATING SUPPORT (BOS) COST DATA. This is the total BOS costs reported for the host and tenant activities in Data Call 66. Please review this data and ensure that it is consistent with FY 1996 OSD Submits budget data. If BOS cost data needs to be revised, specific revisions should be noted on a revised copy of the appropriate Data Call 66 table(s), which should then be returned with this data call response.

UIC	NAME	MAJOR CLAIMANT	***** O&M, etc. *****				***** DBOP *****				***** TOTAL *****			
			RPAIA NONPAY	RPAIA PAY	OBOS NONPAY	OBOS PAY	RPAIA NONPAY	RPAIA PAY	OBOS NONPAY	OBOS PAY	RPAIA NONPAY	RPAIA PAY	OBOS NONPAY	OBOS PAY
61511	NSWC CARDEROCK DIV DET	COMNAVSEASYS&CO	3	3	0	0	2741	940	6086	6799	2741	940	6086	6799
TOTALS:			3	3	0	0	2741	940	6086	6799	2741	940	6086	6799

Note 3. See Attachment II, DJD 01, Question 3.

NOV-12NOV-13-1994 01:33PM NSMC

BRAC-95 SCENARIO DEVELOPMENT DATA CALL

ATTACHMENT 1: BASELOADING DATA

NOV-107 NOV 18 '94 21:34PM NSAC

PART 7: CONTRACT WORKYEAR DATA. This is the total contract workyear data reported by the host and tenant activities in Data Call 66. Please review this data, especially the columns regarding contract workyears which will either be eliminated or transferred as a result of the closure/realignment action. Sum of workyears transferred + eliminated + remaining at activity must equal Total Contract Workyears. Annotate corrections as necessary.

	NAME	MAJOR CLAIMANT	TOTAL CONTRACT WORKYEARS	NO. OF WORK-YEARS TO BE TRANSFERRED	NO. OF WORK-YEARS TO BE ELIMINATED	NO. OF WORK-YEARS REMAINING AT ACTIVITY
533	NSWC CARDEROCK DIV DET	CONNAVSEASYS	101 ⁵	77	20	4
		TOTALS:	101 ⁵	77	20	4

Note: 5 See Attachment II, DJD 05.

P. 7/7

ATTACHMENT II -- BASE STRUCTURE ANALYSIS TEAM (BSAT) REQUESTS FOR CLARIFICATION

<u>BSAT Control Number</u>	<u>Date</u>	<u>Comments</u>
DJD 01	29 Nov 94	
None	30 Nov 94	Referred to as DJD 02
DJD 03	29 Nov 94	
DJD 04	30 Nov 94	
None	01 Dec 94	Referred to as DJD 05
DJD 06	02 Dec 94	Complete resubmission of Scenario #3-20-0198-035A. Not included as part of this Attachment.
DJD 07	02 Dec 94	
DJD 08	03 Dec 94	
DJD 09	03 Dec 94	
DJD 010	05 Dec 94	
DJD 011	05 Dec 94	
DJD 012	05 Dec 94	
DJD 013	06 Dec 94	
DJD 014	06 Dec 94	
DJD 015	06 Dec 94	
DJD 016	07 Dec 94	
DJD 017	07 Dec 94	
DJD 018	07 Dec 94	
DJD 019	07 Dec 94	
DJD 020	07 Dec 94	
DJD 021	08 Dec 94	
DJD 022	08 Dec 94	
DJD 023	09 Dec 94	
DJD 024	12 Dec 94	
DJD 025	13 Dec 94	
DJD 026	13 Dec 94	

BSAT REQUEST FOR CLARIFICATION -- DJD 01

ATTACHMENT II

REQUEST FOR CLARIFICATION

BASH STRUCTURE ANALYSIS TEAM (BSAT)

Control #: DJD 01

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

Date sent: 29 Nov 94

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035:

This fax is to inform you that I have asked Mr. Richard Metrey to provide the following:

1. A breakout (by type of contract) of the \$17M of contract termination costs on p.2-24.
2. An itemization of the \$1,100K of moving, installation & certification of computer systems on p.2-25. Are there more computers being coded here than the one mainframe for the non-Navy tenant?
3. A resolution of the two total facility space figures (629 KSF on p.2-32 & 614 KSF in Attachment 1) I need the following additional information as well (I have not conveyed this to Mr. Metrey yet):
 1. I'm guessing that the \$1M recurring cost for the non-Navy tenant is for all the Joint Spectrum center's personnel to be housed off-base (approximately 140 people according to CDR Walker). I need the annual lease cost for only the approximately 140 employees currently at the Annapolis site.
 2. Why is the \$255K to mobilize the Deep Ocean Pressure Facility a recurring cost (p.2-29)? I need this information by COB today.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

See the attached pages as follows for the answers to the above questions: pg 2-17R --Question #2; pg 2-24R --Question #1; pg 2-25R --Question #2; pg 2-29R --Questions 1(new) & 2(New) and Attachment 1 --Question #3. In regard to the questions related to the DoD Joint Spectrum Center (JSC), responses above reflect the full extent of information provided in the JSC's certified response.

Peter S. Alvarado

Name

NSWC 0111

Code

(304) 221-4431

Commercial Phone #

11/29/94

Date

TD: M. PATE

1150 NAVSEA 081 11/29 NSWC

14001

**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
ENCLOSURE (2) - LOSING BASE QUESTIONS**

Table 2-B (5): Disposition of Personnel and Equipment - Summary

From Losing Base: NSWC - Annapolis							
To Gaining Base: Annapolis, MD - Leased Space (See Note Below Table 2-B(5))							
	1996	1997	1998	1999	2000	2001	Total
Officer Billets	0	11	0	0	0	0	11
Enlisted Billets	0	8	0	0	0	0	8
Civilian Positions	0	115	0	0	0	0	115
Military Students	0	0	0	0	0	0	0
Tons of Mission Equipment	0	See Note Below	0	0	0	0	See Note Below
Tons of Support Equipment	0	See Note Below	0	0	0	0	See Note Below
Number of Light Vehicles	0	0	0	0	0	0	0
Number of Heavy Vehicles	0	0	0	0	0	0	0

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NOTE: This accommodates the Electromagnetic Frequency Spectrum Management facility, presently a Tenant at the NSWC Annapolis Site. It is a fully DoD owned and operated activity. These personnel and equipment reflect the "tenant" levels of this activity and are not of the NSWC Annapolis Site end strengths.

Supporting Data for Table 2-B (5).

Type of Equipment/Vehicles

Rationale for Relocating

NOTE: Cost of moving mission and support equipment was provided by the Joint Spectrum Center and is included in Item 2-F.c.3 on page 2-25R.

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**Annapolis Site
Scenario 3-20-0198-035**

**UIC 61533
20 Nov 1994**

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
ENCLOSURE (2) - LOSING BASE QUESTIONS

Table 2-F: Dynamic Base Information

Complete the following "Supporting Data" section. Then, summarize this data in the Summary Data Table (2-F) that immediately follows this "Supporting Data" section. Show all entries in (\$000).

Table 2-F: Supporting Data:

a. Other One-Time Unique Costs.

Identify any other one-time unique costs at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). Examples include use of temporary office space, lease termination costs, etc. Only costs directly attributable to the closure/realignment action should be identified. This area should not be used to identify routine moving or personnel costs, which are calculated automatically by the COBRA algorithms, nor should it be used to identify one-time unique moving costs which will be addressed separately in item c. below. For each unique one-time cost, identify the amount, year in which the cost will be incurred and describe the nature of the cost. Do not double count any costs identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC - Annapolis:

<u>Cost</u>	<u>FY</u>	<u>Description</u>
1. \$11,200K	1996	Contract termination costs; BEST ESTIMATE due to varying contract types and termination dates
\$ 4,700K	1997	SEE NOTE BELOW.
\$ 1,000K	1998	
2. \$ 2,973K	1999	Depreciation of Capital Equipment; Assumed constant since Data Call #66
3. \$ 15K	1996	Close Library, pack & ship books and periodicals to NSWC, Philadelphia

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NOTE: Based on total contracting load executed by the supply department (excludes public works contracts) for Annapolis in FY94. Assumes termination of contracts for the convenience of the government and 5-percent escalation per year. Includes 100-percent of the value of firm fixed price contracts, 5-percent of the value of cost/time reimbursable and material services contracts, and 3-percent of the value of indefinite delivery/quantity contracts. Reflects estimated contracting load of Post BRAC 93 Annapolis functions and 50/20/5-percent phase out of contracting load.

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Annapolis Site
Scenario 3-20-0198-035

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**BRAC-95 SCENARIO DEVELOPMENT DATA CALL
ENCLOSURE (2) - LOSING BASE QUESTIONS**

b. Other One-Time Unique Savings. Identify any other one-time unique savings at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section). Examples include net proceeds to DoD resulting from an existing MOU with a state or local government, one-time environmental compliance cost avoidances, etc. This area should not be used to identify routine moving or personnel savings, which are calculated automatically by the COBRA algorithms. Do not include Construction Cost Avoidances (which were identified in a separate data call), or Procurement Cost Avoidances (which are covered under item i. below). For each savings, identify the amount, year in which it will occur and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. Do not double count any savings identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC - Annapolis

	<u>Cost</u>	<u>FY</u>	<u>Description</u>
1.	None		

c. One-Time Unique Moving Costs.

The COBRA algorithms use standard packing and shipping rates to calculate the cost of transporting equipment and vehicles. Identify here only those unique moving costs associated with movements out of the losing base that would be incurred in addition to standard packing and shipping costs associated with tonnage and vehicles identified in Table 2-B. Examples of unique moving costs include packing, special handling or recalibration of specialized laboratory or industrial equipment; movement of special materials, etc. If unique costs identified here include packing and shipping costs, then ensure that tonnage for this "unique" equipment is not included under the Mission and Support equipment identified in Table 2-B. For each cost included in the table above, identify the amount, year in which the cost will be incurred, the name of the gaining base and a brief description of the cost.

Losing Base: NSWC - Annapolis

	<u>Cost</u>	<u>FY</u>	<u>Gaining Base</u>	<u>Description</u>	
1.	\$600K	1997	NSWC - White Oak	Disassembly of Electromagnetic Large Scale Model & reassembly & Calibration at NSWC - White Oak	
2.	\$ 4K	1997	NSWC - Philadelphia	Disassemble, pack, ship, and reassemble specialized training equipment	
3.	\$1,100K	1997	Annapolis, MD Leased Space	Move of all Joint Spectrum Center property including installation and certification of the mainframe computer.	R LRW 11/29/94

Note: "Annapolis MD Leased Space" corresponds to the ~~Joint Spectrum Center Electromagnetic Frequency Spectrum Management Facility~~, a Non-DoN tenant activity at this site.

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**Annapolis Site
Scenario 3-20-0198-035**

**UIC 61533
20 Nov 1994**

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BRAC-95 SCENARIO DEVELOPMENT DATA CALL
ENCLOSURE (2) - LOSING BASE QUESTIONS

f. Miscellaneous Recurring Costs. Identify any other recurring costs at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section), e.g., new leases of facilities or equipment, etc. For each cost, identify the amount, year in which the cost will begin and describe the nature of the cost. Only costs directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances or CHAMPUS costs, all of which are calculated by other COBRA algorithms.) Do not double count changes in Mission costs shown above. Do not double count any costs identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC - Annapolis

<u>Annual Cost</u>	<u>FY</u>	<u>Description</u>	
1. \$ 255K	All	Mothball cost for Deep Ocean Pressure Facility SEE NOTE 1.	1 R LRW 11/29/95
2. \$1.000K	All	Cost of leasing office space in Annapolis area for Joint Spectrum Center SEE NOTE & NOTE 2.	1 R LRW 11/22/

NOTE: The "Lease Costs" accommodates the Joint Spectrum Center, presently a tenant at the NSWC Annapolis Site. It is a DOD owned and operated activity. | R LRW 11/22/

NOTE 1. The recurring cost provides basic services (environmental controls) to the specific area housing the Deep Ocean Pressure facility. The environmental controls are required to maintain the future certifiability of this high pressure tank system. Environmental Controls consist of maintaining facility temperature sufficiently above the freezing point of water in Winter to preclude the possibility of damage due to the expansion of frozen water, purging of and placing a nitrogen blanket in the gaseous portions of the system to prevent the possibility of corrosion within pipes, and control of humidity throughout the facility to control the rate of corrosion on the exterior portions of the facility. This cost was obtained from a proportionate allocation of cost to remain in a 'reserve' status from the Detailed Inventory of Naval Shore facilities (NAVFAC P-164). | R LRW 11/29/

NOTE 2. The \$1 M recurring cost is for the 134 Joint Spectrum Center (JSC) personnel to be housed at a collocated site with the approximately 700 contractor personnel already at Admiral Cochran Blvd in Annapolis. The recurring \$1M does not include any costs for the 700 personnel already at that site.

g. Miscellaneous Recurring Savings. Identify any other recurring savings at the losing base which will not be calculated automatically by the COBRA algorithms (as noted in the Introduction section), e.g., elimination of leases of facilities or equipment, etc. For the savings, identify the amount, year in which each will begin and describe the nature of the savings. Only savings directly attributable to the closure/realignment action should be identified. (Do not include changes in non-payroll BOS, Family Housing Operations, housing allowances, CHAMPUS costs or salary savings for eliminated positions/billets, all of which are calculated by other COBRA algorithms.) Do not double count changes in Mission Costs shown above. Do not double count any savings identified on Gaining Base tables (Enclosure (3)).

Losing Base: NSWC - Annapolis

<u>Annual Savings</u>	<u>FY</u>	<u>Description</u>
1. None		

Annapolis Site
Scenario 3-20-0198-035

UIC 61533
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NOV-1964 13:14 11:00 AM 1964

Total Vacuity Square Feet (in thousands)	0	1000/4. . 5
1000	1000	1000
2000	2000	2000
3000	3000	3000
4000	4000	4000
5000	5000	5000
6000	6000	6000
7000	7000	7000
8000	8000	8000
9000	9000	9000
10000	10000	10000
11000	11000	11000
12000	12000	12000
13000	13000	13000
14000	14000	14000
15000	15000	15000
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19000	19000	19000
20000	20000	20000
21000	21000	21000
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89000	89000	89000
90000	90000	90000
91000	91000	91000
92000	92000	92000
93000	93000	93000
94000	94000	94000
95000	95000	95000
96000	96000	96000
97000	97000	97000
98000	98000	98000
99000	99000	99000
100000	100000	100000

... (b) (7), etc. ...

1	2973	9057
1	2973	9057

2

629

Note 4. DBOF OBOS Non-Pay and Total OBOS Non-Pay should be increased by \$2.9/3 K to reflect depreciation of capital equipment

R/V 11/29/94

BSAT REQUEST FOR CLARIFICATION -- DJD 02

ATTACHMENT II

NOV-30-94 WED 12:40

P.01

Department of the Navy Base Structure Analysis Team



Marvin Pat
1150 11/30

Facsimile Transmission Cover Sheet

Date: 30 November 1994

NSWC Annapolis - DOD Tenant

From: Don DeYoung
Office: (703) 681-0478
Fax: (703) 756-2174

To: Jim Logan or Judith Atkins
Org: Naval Sea Systems Command
Office:
Fax: 703-602-0541

Message:

1. Using the function categories in the attached table, identify - for both alternatives - the categories of proposed moved and eliminated billets. Show moved and eliminated separately. Also, group the FY96 baseline manpower data - shown in Table 2-D of the scenario responses - in the same function categories.
2. Provide the following information for the Joint Spectrum Center.
 - number of officer, enlisted, military student, civilian positions to be relocated.
 - cost of moving only the mainframe computer
 - # of square feet of leased space required to accommodate the 134 personnel moving.
3. I need this data by 1600 today.

Table 4.1, General Support Resources for
(Activity: _____) (UIC: _____)

Command (CDSO/TO/etc.)									
Computer									
Admin									
Human Resources									
Supply Management									
Consolidated Component Computer Support									
Information Systems and Communications									
Safety/OSH/Environmental									
Physical Security									
Public Works/Staff Chd. Expt									
Fire Protection									
Medical/Dental									
Military Support									
Air/Watercraft Operations									
Other									
Technical Operations									

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: No Control Number Provided

Receipt of Request: 1240 Hrs

Due Time: 1600 Hrs

1. Using the function categories in the attached table, identify - for both alternatives - the categories of proposed moved and eliminated billets. Show moved and eliminated separately. Also, group the FY96 baseline manpower data - shown in Table 2-D of the scenario responses - in the same function categories.

Response: The table provided for the response included a discrimination between the infrastructure organizations and the technical operation personnel. Both the baseline scenario and the alternative scenario provide for the elimination of all infrastructure personnel. Please see attached summary table for the respective comparisons.

2. Provide the following information for the Joint Spectrum Center:

- a. What is the number of officer, enlisted, military student, civilian positions to be relocated?

Response: Per Table 2B(5)

Officers	11
Enlisted	8
Civilian	115
Military Students	0

- b. What is the moving only the main frame computer?

Response: Per your request, we have contacted the Joint Spectrum Center to obtain the information. They have advised that the estimate of \$1.1M includes the movement of all their facilities to a leased space at Annapolis. Due to the nature of their business, we were unable to obtain any additional information or break-outs of equipment, etc.

- c. What is the number of square feet of leased space required to accomodate the 134 personnel moving?

Response: The Joint Spectrum Center currently occupies thirty-six thousand (36,000) square feet at NSWC-Annapolis. It is understood it intends to lease the same amount of space for those functions potentially being displaced from the Annapolis site.

JSC 11/30/94

NSWC-Annapolis UIC: 61533

Command (CO, XO,TD, etc.)
Comptroller
Admin
Human Resources
Supply Management
Consolidated Computational Computer Support
Information Systems and Communications
Safety/OSH/Environmental
Physical Security
Public Works/Staff Civil Engr
Fire Protection
Medical/Dental
Military Support
Air/Waterfront Operations
Other
Technical Operations
Total

3-20-0198-035		
Start	Moved	Elim
2	1	1
0	0	0
1	0	1
2	0	2
7	0	7
0	0	0
1	0	1
4	0	4
9	0	9
30	0	30
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
376	175	201
432	176	256

3-20-0198-035A		
Start	Moved	Elim
2	1	1
0	0	0
1	0	1
2	0	2
7	0	7
0	0	0
1	0	1
4	0	4
9	0	9
30	0	30
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
376	280	96
432	281	151

BSAT REQUEST FOR CLARIFICATION -- DJD 03

ATTACHMENT II

REQUEST FOR CLARIFICATION

BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control #: DJD 03

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

Date sent: 29 Nov 94

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0208-035 and 35A:

1. In comparing the scenario response and its accompanying alternative, I see that the contract termination costs for both scenarios are exactly the same. Why do these costs remain the same when the alternative retains R&D functions that the scenario response does not? Since you are transferring R&D functions to Philadelphia, Carderock, White Oak, and NRL, why wouldn't these contracts be modified to change the services for or shipping destination? If termination costs will be required, each contract requiring such action must be provided with a detailed description of what is being purchased, why it is more economical to terminate, the total contract value and unpaid balance, and methodology for estimating termination costs.
2. Why can't the existing fire testing facilities at NRL do all of the work identified in the scenario responses? NRL has extensive fire test facilities, including the Fire Research Enclosure (10,000 cu ft) and ex-FISS SHADWELL (2,000 tons) test bed. I need this information by 1900, 30 November.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

Please see attached pages

W. A. Middleton/H. Metry 09101 301-227-3196/1628 11/30/94
Name Code Commercial Phone # Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A
Reference: Control #DJD 03

1. In comparing the scenario response and its accompanying alternative, I see that the contract termination costs for both scenarios are exactly the same.

- a. Why do these costs remain the same when the alternative retains R&D functions that the scenario response does not?

Response: The cost profile was based upon best estimate of FY94 baseline data projections to FY98. Though it is natural to assume some decreases could be obtained, any percentage decrease assumed at this time would be purely speculative. Given additional analysis time, an accurate response could be provided with the appropriate certification.

- b. Since you are transferring R&D functions to Philadelphia, Carderock, White Oak, and NRL, why wouldn't these contracts be modified to change the service site or shipping location?

Response: Per the below discussion, contracts would be structured after "closure" determination to minimize terminations and increase the use of multiple service sites and/or shipping locations.

- c. If termination costs will be required, each contract requiring such action must be provided with a detailed description of what is being purchased, why it is more economical to terminate, the total contract value and unpaid balance, and methodology for estimating termination costs.

Response:

- a. The response provided by the BRAC Scenarios 3-20-0198-035 and 3-20-0198-035A included the below assumptions:

- The FY94 Contracts baseline would remain the same level of magnitude and contract lengths;
- The termination costs were defined per the types of contracts;
 - (1). Indefinite Quantity (IDIQ), both Cost Plus Fixed Fee (CPFF) and Firm Fixed Price (FFP), were given a 3% termination fee;
 - (2). CPFF were given a 5% termination fee;
 - (3). Cost Reimbursable were given a 5% termination fee;
 - (4). FFP were given a 100% termination fee; and
 - (5). Time and Materials were given a 5% termination fee.
- Due to time constraints, the distribution of FY94

- contracts between the Post BRAC 31 retained functions and the present on-board functions were assumed to be evenly distributed, i.e. FY94 contracting values were halved for this analysis.
- Post FY94 contracting levels were escalated by 5% per year for inflation.
- The contracting levels were phased downward from the "start of closure" levels to "zero" by FY99.

- b. The requested detailed cost analysis for the most cost effective option of "termination" versus realignment of the contract to the Philadelphia site requires the examination of each contract that will be in existence at the time of letting/termination. The baseline data impacting desired resulting analyses include knowledge of the type of contract, the duration/type of the deliverables, the company providing the product and/or services, and the foreknowledge at the availability of the collateral functions in the Philadelphia site. This analysis will require at least two weeks of detailed work by the Contracts staff.
- c. It should be noted that upon alertment of firm closure of the Annapolis Site, the Command would phase the contract types to minimize termination costs and increase the potential for direct ~~of~~ transfer of deliverables with minimal increased costs.

Question 2: Why can't the existing fire testing facilities at NRL do all of the work identified in the scenario responses? NRL has extensive fire test facilities, including the Fire Research Enclosure (10,000 cu.ft.) and ex-USS SHADWELL (9,000 tons) test bed.

The existing fire testing facilities at NRL do not duplicate and are not adequate for the intermediate-scale fire testing work identified in the scenario response. The Fire Research Enclosure (Fire-1) (located at Chesapeake Beach Detachment) and the ex-USS SHADWELL (located in Mobile, AL) are extremely large-scale, custom-built, and specialized facilities dedicated to validate and certify full-scale ship fire scenarios for active and passive fire protection systems. The other existing facilities at NRL are large-scale burn chambers, which are not suitable to perform intermediate-scale fire testing without modification. However, these burn chambers are necessary in their present configurations to meet existing Navy requirements. The other facilities at Chesapeake Beach are primarily open building spaces, which do not contain the specialized intermediate-scale equipments being transferred from NSWC, Carderock Division, Special Area (NIKE Site) as identified in the scenario responses. This specialized equipment includes: a room-size calorimeter, a large-scale,

customized variable heat rise furnace, and two intermediate scale burn chambers containing accessories, controls and associated instrumentation needed to operate them. The unused building space at NRL/CBD can be easily modified to house the aforementioned specialized equipment, that is necessary to execute the intermediate-scale fire testing function/requirement. Intermediate-scale fire testing is a cost-effective means to screen and select fire protection system alternatives, which are then validated and certified with associated higher test costs in the full-scale NRL facilities (Fire-1 and ex-USS SHADWELL).

DEC 01 '94 08:24AM NSWC

REQUEST FOR CLARIFICATION

BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control #: DJD 04

Date sent: 30 Nov 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0208-035 and 35A:

1. NSWC Carderock has very capable Deep Submergence Pressure Tanks that are also funded by the same Navy and non-Navy sponsors as the Deep Ocean Machinery and Vehicles Pressure Simulation Facility at Annapolis. Explain what functions the Deep Ocean Facility performs that the Deep Submergence Pressure Tanks at Carderock can't perform?
 2. Explain why the Navy must maintain the future certifiability of the Annapolis facility.
 3. I don't understand "reserve status." Is it the same as "mothball status"?
 4. Can't the environmental controls required for future certifiability be relaxed if the gases and fluids in the Annapolis facility were bled? If so, how would that affect the cost estimate for "mothballing"?
 5. When was the Annapolis facility built?
 6. Who funds the Joint Spectrum Center?
- I need this information by 1100, 1 December.

Don DeYoung (703) 581-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

Please See Attached Pages (4)

Dr. W. Middleton Mr. McCreary

Name

01A/01

Code

301-227-3186

Commercial Phone #

12/1/94

Date

BSAT REQUEST FOR CLARIFICATION -- DJD 04

ATTACHMENT II

✓

Scenario Development Data Call # 3-20-01~~88~~⁸⁹-035/A

CLARIFICATION/CORRECTION REQUEST

Reference: BSAT Control #: DAD 04

Received: 0824 Hrs On 12/1/94

Due: 1100 Hrs On 12/1/94

1. "NSWC Carderock has very capable Deep Submergence Pressure Tanks that are also funded by the same Navy and non-Navy sponsors as the Deep Ocean Machinery and Vehicles Pressure Simulation Facility at Annapolis. Explain what functions the Deep Ocean Facility performs that the Deep Submergence Pressure Tanks at Carderock can't perform?"

Response:

The Annapolis and Carderock site operations are funded under the DBOF program. As noted in your question, some of the funding is provided by the US Navy programs and other from the commercial base (both domestic and foreign). However, as noted in the responses to the below questions, the difference in the testing capabilities usually provides for different customer bases.

A summary of the primary differences between the Annapolis Deep Ocean Machinery and Vehicle Pressure Simulation Facility and the pressure vessels at the Carderock Site are provided in the attached table. As may be noticed, one of the most important distinctions is that the Annapolis facility is both man-rated and performs hard cycling. The concept of "hard cycling" versus "soft cycling" is explained at the bottom of the table. Hard cycling is required for the testing of machinery and manned vehicle systems.

In addition, the Annapolis facility capability to place large horizontal vehicles (both manned and unmanned) under certified "man safe" conditions is unequalled. In addition, the temperature controlled feature combined with very deep pressures provides the ability to test deep ocean connectors (as recently performed for AT&T). A recent example of the utility of the Annapolis facility capability is the closure of the United Kingdom's smaller and less capable systems with the intent to utilize the facility which the NSWC Carderock Division wishes to retain at the Annapolis site.

The deep pressure vessels located at the Carderock Site are equally unique in their ability to conduct structural testing of advanced hull shapes and materials. Their ability to perform dynamic and static pressure loading on vertically oriented models replicates the free field characteristics necessary for fatigue and fracture testing. These pressure vessels and control systems are not capable of being modified to perform horizontal vehicle or man-safe operations. In

✓

3-20-01~~88~~⁸⁹-035/A
Control #:DAD 04

addition, neither can the Annapolis site facility be modified for the vertical structural loading testing capabilities.

2. "Explain why the Navy must maintain the future certifiability of the Annapolis facility."

Response:

There are no other equivalent facilities in the western world that have the capability to evaluate and qualify vehicles, deep ocean machinery, large size composite structures, and fiber optic cable designs for both the Navy and commercial applications at deep ocean pressures.

As stated above, the Annapolis Deep Ocean Machinery and Vehicle Pressure Simulation Facility's capability to perform rapid pressure changes ("hard cycling") under controlled water temperature conditions (to ensure material properties are being simulated as in real world conditions) is unique in the World. Certification ensures the capability to conduct both manned and unmanned vehicle testing safely and responsively. Not only is it technically prudent to maintain a certified responsive capability for this unique asset, it is necessary to have a rapid response capability to meet emergency investigative requirements, as in the Thresher investigation and related manned submersible certifications.

3. "I don't understand 'reserve status.' Is it the same as 'mothball status'?"

Response:

Yes. The basic document used for estimating the cost of moth balling does not include a category by that specific title. The "reserve" category in that document, NAVFAC P-164-Detailed Inventory of Naval Shore Facilities, is the same as mothball, i.e. it is the category between "standby" and "abandon".

4. "Can't the environmental controls required for future certifiability be relaxed if the gases and fluids in the Annapolis facility were bled? If so, how would that affect the cost estimate for 'mothballing'?"

Response:

It was assumed that gases and fluids would be bled from the Deep Ocean Pressure facility equipment. With the exception of the water, all other fluids (Glycol, Freon, lubrication, and hydraulic oils) are essentially preservatives and best left in place to protect the equipment. The temperature control is required to prevent excessive condensation and the freezing of any residual fluids that remain in the system at low points.

MM

3-20-0190-035/A
Control #:DAD 04

5. "When was the Annapolis facility built?"

Response:

The facility was built in 1970 with an estimated life span of 44 years (i.e. 2014).

6. "Who funds the Joint Spectrum Center?"

Response:

The Joint Spectrum Center (JSC) was established from the Electromagnetic Compatibility Analysis Center (ECAC) in mid September, 1994. Prior to FY95, the funding was provided under PE 33144F (Air Force) as well as through the Industrial Funding program (similar to the present DBOF).

Through FY95, the Air Force will remain the Executive Agent for the JSC. Starting in FY96, DISA is scheduled to become their executive agent and will include the JSC operations within their budget.

LARGE PRESSURE TANKS FEATURES

NSWC — CARDEROCK DIVISION

Site	Annapolis	Carderock	Carderock
Geometry	10-Foot Diameter Opening, 27 Feet in Internal Length	13-Foot Diameter Opening, 40 Feet in Internal Length	10-Foot Diameter, Spherical
Maximum Pressure	12,000 PSI	3,000 PSI	10,000 PSI
Cycle*			
Hard	0 PSI → 4,000 PSI (Max.) → 0 PSI in One Minute (Rated for 2,000,000 Hard Cycles)	N/A	N/A
Soft	11,600 PSI Pressure Differential	2,600 PSI Pressure Differential	9,600 PSI Pressure Differential
Heat Removal Capacity (Max.)	1,500,000 BTU/HR, Annapolis Site has 120 Ton of Refrigeration and Associated Support Equipment (Heat Exchangers, Piping, High Pressure Circulation Pumps) in Place	Refrigeration Equipment is Available to Cool these Tanks to 35°F and Maintain at that Temperature Provided Tanks are Being Used to Test Items that do not Generate Heat.	
Orientation	Horizontal	Vertical	N/A (Spherical)
Construction	Two Layer; Acoustically Quiet, No Liner Needed	Multi-Layer; Not Acoustically Quiet, Liner Needed	Multi-Layer
<p>* There are two types of Pressure Cycling. The first type, called Soft Cycling, is a patented system which allows cyclic testing by varying pressure within model and keep tank pressure constant. The second type, called Hard Cycling, subjects the test object to an external pressure up to the maximum-rated capacity of the pressure tank while keeping the inside of the test object at normal atmospheric conditions, thus permitting testing of manned vehicles.</p>			

DEC-1-94 THU 9:48

SURVIVABILITY

FAX NO. 4102932638

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BSAT REQUEST FOR CLARIFICATION -- DJD 05

ATTACHMENT II

Pursuant to the 12/1/94 telephone direction from Mr. Don DeYoung, the below changes to the Attachment 1: Base Loading Data are certified:

To correct the addition of the below components, change the "Total Contract Workyears" from 102 to 101:

No. of Work Years To Be Transferred	= 77
No. of Work Years to be Eliminated	= 20
No. of work-years remaining at the activity	= <u>4</u>
Total Contract Workyears	=101

BSAT REQUEST FOR CLARIFICATION -- DJD 07

ATTACHMENT II

REQUEST FOR CLARIFICATION BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DDJ 07

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jan Logan or Judith Atkins Fax: 703-602-0341

Data sent: 2 Dec 94

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0208-0354;
0.78

1. Previous responses to RUC #DDJ04 stated that the "Annapolis facility capability to place large horizontal vehicles (both manned and unmanned) under certified "man safe" conditions is unequaled..." When was the last time that a manned vehicle was tested in the facility? How many times over the last five years? What would be the risk to the Navy if the facility were closed? Where would the United Kingdom go for its testing if the Annapolis also is closed?
2. Page 1-3 states that the capability to conduct land based high pressure acoustic measurements of submarine ballasting would be unchallenged. What facility is this? What is the near and long term risk to the Navy for the loss of this capability?
3. Page 1-4 cites the elimination of the potable water supply for Navy housing. What options can be exercised to provide water service to the housing units? What would be the impact of closing the fuel storage and refueling site for the Naval Academy's Yard Patrol craft? Can the Academy receive this service from another source? I need this information by 1500, 3 December.

Don DeYoung (703) 581-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

Please see attached sheets

Mr Metrey

Name

01

Code

501-227-1515

Commercial Phone #

12/3/94

Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 07

Received: 1002 Hrs; 3 Dec 94

Due: 1500 HRS; 3 Dec 94

1. Previous response to RFC #DJD04 stated that the "Annapolis facility capability to place large horizontal vehicles (both manned and unmanned) under certified "man safe" conditions is unequalled..."

- a. When was the last time that a manned vehicle was tested in the facility?

Response: 1983, the Pices IV vehicle.

- b. How many times over the past five years?

Response: None. However, the facility has been used continuously for qualifying and evaluating equipment and systems for the Navy's Deep submergence assets (manned and unmanned). The need for the facility lies in its ability to support manned vehicle tests (i.e. tests while the vehicle is occupied by humans) when the requirement exists. As there are few such vehicles, the need exists on demand vice "production base" concepts.

- c. What would be the risk to the Navy if the facility were closed?

Response: At sea testing would have to be conducted, with the inherent risks to human life due to potential catastrophic failures.

- c. Where would the United Kingdom go for its testing if the Annapolis site closed?

Response: The United Kingdom has advised the US Navy that it had recently "moth balled" their facility and were planning on using the Deep Ocean Pressure Facility located at the Annapolis Site. The NSWC Carderock Division has no knowledge of what alternative plans may have been discussed or addressed by the United Kingdom.

2. Page 1-3 states that the capability to conduct land based high pressure acoustic measurements of submarine ballasting would be mothballed.

- a. What facility is this?

Response: The Submarine Fluid Dynamics Laboratory (reference BRAC 95 Data Call #5, Tab B) provides for the measurement of high pressure acoustic measurements of submarine ballast

systems and related valve configurations. It is a major test element in the development of advanced submarine stealth subsystems. These measurements are conducted on both existing and new design valves and piping configurations for the purposes of reducing the flow noise under varying valve positions, piping angles, and "necking down" conditions. The ability to conduct flow acoustics under isolated and high pressure conditions does not exist at any government or commercial site. Its estimated replacement value is \$15M.

- b. **What is the near and long term risk to the Navy for the loss of this capability?**

Response: As this is the only facility of its kind, the loss of this capability would be eliminate the ability to conduct land-based ballast and piping low ambient acoustic testing.

- 1). Near Term: In the near term, the present vehicle radiated acoustic ambients would have to suffice and any lower threshold acoustic ambients due to ballasting operations would have to be met through the use of full scale testing. This would most likely require "dry docking" of an operational submarine, making the appropriate modifications, and conducting the trials at sea. Full scale operations could be restricted due to the SUBSAFE certification requirements, depending upon the extent and location of the piping/valving modifications. If the facility is only "moth balled", then during an emergent situation, it could be re-opened for special testing.
- (2). Long Term: In the long term, the loss of this capability will eventually eliminate the knowledge base and ability to develop advanced low ambient acoustic valves and piping with the resultant decrease in the stealth of the submarine force.

2. Page 1-4 information questions:

- a. **Page 1-4 cites the elimination of the potable water supply for Navy housing. What options can be exercised to provide water service to the housing units?**

Response:

The North Severn Navy housing is dependent upon the potable water supplied by the NSWC Annapolis site. The local water supplies are inadequate to support these requirements. Potential options include:

- (1). Construct a new potable water treatment facility for either a public utility or other operating agency for the Navy housing units at a location off the Annapolis site. As such analyses are the purview of the NAVFACENCOM, no detailed cost analysis for this option has been performed by the NSWC Annapolis personnel.
- (2). Continue the operation of the existing facilities. As the BRAC 95 Scenario guidance stated that the Annapolis site must be closed, Option 2 was not included in the scenario response.

b. **What would be the impact of closing the fuel storage and refueling site for the Naval Academy's Yard Patrol Craft?**

Response: The Naval Academy would have to obtain the required services from another source.

c. **Can the Academy receive this service from another source?**

Response: The fuel storage and refueling support functions for the Naval Academy's Yard Patrol Craft is part of the site host functions. As such, the below potential options could be examined by either the Naval Academy or other activity:

- (1). Utilize commercial docking and refueling resources. The technical requirements (due to fueling hose and connection differences from commercial resources), environmental requirements, capacity, and related issues would need to be examined for feasibility;
- (2). Build another facility at another site. Again, environmental and cost elements would need to be addressed by the proper authorities.
- (3). Maintain the existing facilities at the present site. As the BRAC 95 Scenario guidance stated that the Annapolis site must be closed, this option was not included in the scenario response.

BSAT REQUEST FOR CLARIFICATION -- DJD 08

ATTACHMENT II

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DID 08

Date sent: 3 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUEST (ID for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. What necessary technical capabilities does the Magnetic Silencing Facility at White Oak possess that, when combined with the MTL, meets the Navy's requirements in this area? If these combined facilities need to be retained, what other site(s) than Annapolis and White Oak would be suitable (e.g., NSWC-Philadelphia)? How much would the relocation to this site(s) cost?
2. Please identify the number of personnel that are proposed to be relocated with each facility on the attached chart.
3. Why is it important to transfer the three Information Management Systems billets, to NSWC-Carderock? Why transfer the officer billet? The critical need to retain them is not readily apparent when they do not currently reside with the rest of the function at Carderock.
4. What other Navy, DoD, or private sector sites are currently performing, or are capable of performing, the non-CPC work that would be eliminated under the proposed scenario? With the potential costs to the Navy being so high, why aren't the non-CPC laboratories proposed for relocation?

I need this information by 1700, 4 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-1874. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: Please see attached pages

Mr. Metrey
Name

01
Code

301-227-1628
Commercial Phone #

12/4/94
Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 08

Received: 1157 Hrs; 4 Dec 94

Due: 1700 HRS; 4 Dec 94

1. Below questions and responses apply:

- a. **"What necessary technical capabilities does the Magnetic Silencing Facility at White Oak possess that, when combined with the MFL, meets the Navy's requirements in this area?"**

Response:

The technical capabilities incorporated in the Magnetic Silencing Facility at White Oak complement those at the Annapolis site. The White Oak site concentrates on the magnetic signature reduction and control for steel-hulled surface ships, closed loop degaussing, and Mine-Counter Measure ships. Its focus is upon reducing the electromagnetic influence signatures in the field of mine countermeasures.

The technical capabilities residing at the Magnetic Fields Laboratory at Annapolis encompass the submarine machinery and hull electromagnetics signature characterizations, reductions, and control, which does not exist elsewhere. Large scale submarine models and actual shipboard machinery (up to 40 tons weight) magnetic signature measurements are conducted. These test capabilities are critical to reducing the risks of electromagnetic detection by surveillance and ordnance systems.

Combining these technical capabilities into a single magnetic fields facility would meet the Navy's total critical electromagnetic R&D requirements.

- b. **"If these combined facilities need to be retained, what other site(s) than Annapolis and White Oak would be suitable (e.g. NSWC-Philadelphia)?"**

Response:

Both the Magnetic Fields Laboratory at NSWC, Annapolis Detachment and the Magnetic Silencing Facility at NSWC, White Oak Detachment require special site considerations. These include the absence of ferrous materials within a 3-D arc of the operations. In addition, a relatively steady state earth field must exist in the geographic location.

Based upon known conditions and the need to retain the critical technologies near the other ship and submarine signature reduction functions, an alternative site for

collocating both the Magnetic Fields Laboratory at NSWC, Annapolis Detachment and the Magnetic Silencing Facility at NSWC, White Oak Detachment would be the NSWC, Carderock site. Unlike the NSWC Philadelphia Detachment site, the NSWC, Carderock site has excellent records in the burial of ferrous materials, is not a low altitude "fly over" zone (which perturbs magnetic fields), and has the adequate control on ferrous material interventions.

c. **"How much would the relocations to this site(s) cost?"**

Response:

Scenario 3-20-0198-35A which contained the cost for the partial replication of the Magnetic Fields Laboratory at NSWC, Annapolis Detachment was quoted at \$5M. This cost provided for the maximum utilization of existing buildings, power supplies, infrastructure support (roads, personnel facilities, etc.) adjacent to the Magnetic Silencing Facility at the NSWC, White Oak Detachment site.

Scenario 3-20-0198-42A which contained the cost for the partial replication of the Magnetic Silencing Facility at the NSWC, White Oak Detachment site adjacent to the Magnetic Fields Laboratory at NSWC, Annapolis Detachment was quoted at \$2M. This cost, as in the case of Scenario 3-20-0198-35A, provided for the maximum utilization of existing buildings, power supplies, infrastructure support (roads, personnel facilities, etc.) at the NSWC, Annapolis Detachment.

The combining of the two facilities at the Carderock site, as at any other site, would require an in-depth engineering study. The engineering study would need to examine the full building, power, and environmental considerations for a merged synergistic capability. There is insufficient time during this query period to conduct and provide the required financial data.

Though such an engineering study is required, an approximate cost for fully replicating the two facilities at another site, e.g. Carderock, is \$20M.

2. **"Please identify the number of personnel that are proposed to be relocated with each facility on the attached sheet."**

Response: Please see annotations on attached tables.

3. **The below questions and responses apply:**

- a. **"Why is it important to transfer the three Information Management Systems billets, to NSWC-Carderock? The critical need to retain them is not readily apparent when they do not**

currently reside with the rest of the function at Carderock."

Response:

Tables 2-A(2) and 2-B(2) of the Scenario 3-20-0198-35A state that two civilian billets will be moved to the NSWC Carderock site. As discussed in the narrative below Table 2-B(2), these critical functions are presently being performed utilizing the equipment located at the Carderock site. This scenario provides for the relocation of the personnel, presently working at the NSWC Carderock site but organizationally attached to the NSWC Annapolis site.

- b. **"Why transfer the officer billet? The critical need to retain them is not readily apparent when they do not currently reside with the rest of the function at Carderock."**

Response:

There are presently TWO officer billets associated with the NSWC Annapolis Detachment site. The Officer-In-Charge billet would be eliminated under both Scenario 3-20-0198-35 and Scenario 3-20-0198-35A.

It was the NSWC Carderock Division Commander's judgement that the other officer billet now resident at the NSWC Annapolis Detachment site would be required at the NSWC Carderock site in order to retain a pro-rata balance of civilian/military focus within the reorganized Carderock Division.

The fundamental issue goes to the need to ensure that appropriate and current fleet influence, in the form of active duty Naval officers, be reflected in the Navy's research and development Commands. Additionally, billets for active duty officers must be maintained within the Naval Surface Warfare Center as necessary developmental positions for the development of future CO's and Commanders.

The success of the Navy Laboratory/Engineering station program is predicated upon a marriage of Fleet-wise active duty Naval Officers with the engineering and scientific community.

4. The below questions and responses apply:

- a. **"What other Navy, DoD, or private sector sites are currently performing, the non-CFC work that would be eliminated under the proposed scenario?"**

Response:

No other Navy, DoD, or private sector sites are currently performing the non-CFC work that would be eliminated under the proposed scenario. The Annapolis based team is using all available means to accommodate the international CFC production ban and to minimize the Navy's dependence upon its limited stockpile.

Central to this has been the assembly of an extensive laboratory to characterize non-CFC refrigerant compressors and complete fleet and developmental systems under the full range of "at sea" demand conditions.

Other sites, e.g. York International (York, PA), could be equipped to perform this work if equipments and facilities now installed at Annapolis are relocated. Such a relocation process, coupled with the additional disruption of staff replacement and training will have an adverse impact on the availability of USN systems which use non-CFC refrigerants.

- b. **"With the potential costs to the Navy being so high, why aren't the non-CFC laboratories proposed for relocation?"**

Response:

It is recognized that the termination of the Annapolis non-CFC program before its completion, or total disruption through the relocation, will delay the development of CFC-free systems. This will increase pressures on the current limited Navy CFC stockpiles, which will be difficult or impossible to increase now the impending production ban presently in place.

Our alternative proposal, Scenario 3-20-0198-35A, recommended relocation of facilities which maximize our capability retention consistent with constraints to limit total one-time costs. Since there would still be an adverse program impact (even with a relocation of non-CFC facilities) and the relocation costs would be high, such a proposal was considered beyond the "knee of the curve", and was not included.

Facility Name	One-Time Unique Move Cost	Receiving Site	Description // Rationale
Advanced Propulsion Machinery Facility 9	\$10.0M	Philadelphia	Consists of a full scale submarine shaftline, full scale submarine shaft seal test facility, and a full scale composite shaft tracer/bending facility including instrumentation, controls and required cooling, lubrication, and other services // Allows retention of a unique Navy capability to conduct full scale submarine shaftline component and system R&D and qualification/certification
Machinery Acoustics Silencing Facility 32	\$4.9M	Philadelphia	An R&D facility consisting of three cells for reduction of submarine machinery acoustic noise from fans, pumps, compressors, motors, hydraulics, and other machinery components. Includes acoustic wall treatment, massive seismically isolated floor, specialized low noise support systems, instrumentation, resilient mount laboratory, and many low noise prototype components // Retains the Navy's only integral capability to conduct R&D, evaluate, specify, and certify machinery acoustic performance in a land based facility, thus avoiding the prohibitive cost of doing so at sea.
Magnetic Fields Laboratory Assigned Site Personnel TOTAL REQUIRED AT White Oak 17	\$5.0M	White Oak	A very specialized facility including a totally non-magnetic four story building equipped for operation of full scale minesweeper machinery and measurement of its acoustic signature as well as that of large scale models of submarines and surface ships. The capability of simulating ambient magnetic conditions of any location on Earth is included. // Retains the only existing critical capability to measure and certify the magnetic signature of minesweeper machinery

Table I
Seven Major Facilities Relocated from Annapolis

Facility Name Revised	One-Time Unique Move Cost	Receiving Site	Description // Rationale
Advanced Shipboard Auxiliary Machinery Facility 20	\$2.2M	Philadelphia	Laboratories, test bays and equipment for conduct of R&D, integration, and experimental test and evaluation on compressed air systems, heat exchangers, ventilation systems, fluid systems, piping, valves, hydraulic steering and diving systems, fresh water production, and composite machinery for surface ships and submarines // Retains critical technical capability rated highest in value at Annapolis
Electric Power Technology Facility 19	\$3.0M	Philadelphia	Laboratories, test bays, simulation equipment, multiple interconnected electrical power sources, loads and transmission equipment for conduct of R&D, integration and experimental test and evaluation of surface ship, submarine, and aircraft carrier electric power generation, conversion, and distribution systems and equipment, and solid state power device R&D // Retains the critical test capability rated second in value at Annapolis
Advance Electric Propulsion Development Facility 4	\$2.3M	Philadelphia	Laboratory, test bay, and equipment to allow R&D and experimental evaluation of full scale and subscale electric propulsion components and systems up to 3000 horsepower. Includes prime movers, loads, support equipment, and experimental motors and generators. // Retains critical propulsion R&D capability and complements planned full scale electric drive systems testing in Philadelphia
Pulsed Power Facility 5	\$2.0M	Philadelphia	Experimental facility including staging and assembly area, prime power and fuel system, high voltage grounding grid, electromagnetic interference shielding, pulse forming networks, transmission lines and power conditioning for R&D and experimental testing and integration of pulsed power electrical source for future weapons systems // Continue Navy's only integral capability to conduct R&D for future weapons systems powering

BSAT REQUEST FOR CLARIFICATION -- DJD 09

ATTACHMENT II

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DDD 09

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Phone: 703-602-3541

Date sent: 3 Dec 94

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. Total facility shutdown is cited as 589 KSF due to mothballed facilities. Please identify these facilities and the amount of space allotted to each.
2. The BSAC statement reads "Close NSWC Det Annapolis, including special area (NIKE Site). Why does the alternative keep the site open when it can be located with the rest of the Ship Materials Engineering Department and when, according to the baseline response, it is clearly feasible to do so? If this equipment must be retained in their present location, justify why this is technically necessary.
3. What are the estimated additional travel cost/savings between Carderock, White Oak, Philadelphia, the NIKB site (035-A only), NRL, and the JSC that would be incurred in the course of performing all of the relocated work? Estimate these costs separately for each scenario.
I need this information by 1700, 4 December.

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s) PAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.
Reply: *Please see attached pages*

Mr. Metrey
Name

01
Code

301-227-1620
Commercial Phone #

12/4/94
Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 09

Received: 1157 Hrs; 4 Dec 94

Due: 1700 HRS; 4 Dec 94

- 1. "Total facility shutdown is cited as 589 KSF due to mothballed facilities. Please identify these facilities and the amount of space allocated to each."**

Response:

The only facility proposed for moth ball status is the Deep Ocean Machinery and Vehicle Pressure Simulation Facility which occupies 29.4 KSF.

The entry in Line j of Table 2-F on page 2-42 should be 598 vice 589. The same transposition error was carried into Note 3 of Attachment 1: Base Loading Data. This will be formally submitted with the appropriate certifications.

- 2. The below questions and responses apply:**

- a. "The BSEC statement reads "Close NSWC Det Annapolis, including special area (NIKE Site). Why does the alternative keep the site open when it can be located with the rest of the Ship Materials Engineering Department and when, according to the baseline response, it is clearly feasible to do so?"**

Response:

The baseline scenario (3-20-0198-35) directed the closure of both the Annapolis and Nike sites. This required the relocation of the post-BRAC 91 non-Annapolis functions to the Carderock site, where the Ship Materials Engineering Department is to be centered. The relocation costs, as discussed in Scenario 3-20-0198-35, Section 3, required approximately \$1M in MILCON.

As the BRAC 95 Scenario 3-20-0198-35 provided an opportunity for an alternative scenario, the NSWC Carderock Division Command elected to minimize the BRAC related costs by not incurring the costs for relocation of the facilities to the Carderock site.

- b. "If this equipment is to be retained at their present location, justify why this is technically necessary."**

Response:

This equipment is to be retained at their present location, since the relocation costs, as discussed above (question 2.a above) required are approximately \$1M in MILCON.

These advanced materials processing capabilities are technically necessary as their loss would have an adverse impact to the Navy: Thermal Spray for Machinery Element Restoration - preclude the development and modification of processes, procedures, and materials that contribute to maintenance cost savings and Fleet readiness through the IMA's, SIMA's and naval shipyards, including on-site training and qualification of military personnel; Polyurethane Processing - provides a prototyping and producability capability, with highly specialized and patented processes and equipment, unmatched in the private sector; and the interactive, multi-disciplinary scientific and engineering efforts at NSWCCD and the security classification dictate that this effort be conducted to cost-effectively meet Navy's signature requirements for hydrodynamic and machinery systems; and Reactive Metal Spray Forming - Elimination of this emerging R&D capability for affordable titanium & other naval alloys for near net shape machinery components, which does not exist in the private sector, would preclude the development of reduced cost of ownership of auxiliary ship systems acquisition and life cycle). Under Project Reliance NSWCCD has been designated as the lead and only service to conduct research & development of Metal Spray Forming Technology.

3. "What are the estimated additional travel costs/savings between Carderock, White Oak, Philadelphia, the NIKE site (35-A only), NRL, and the JSC that would be incurred in the course of performing all of the related work? Estimate these costs separately for each scenario."

Response:

Increased travel costs between sites in the Carderock Division which would result from BRAC 95 Scenario 3-20-0198-35 and Scenario 3-20-0198-35A are expected. For both Scenario 3-20-0198-35 and Scenario 3-20-0198-35A, there is some anticipated additional travel costs. These costs are expected to be less than \$400K annually for either scenario.

For Scenario 3-20-0198-35A, if the moth balled Deep Ocean Vehicle Simulation Facility at the NSWC Annapolis Detachment site is required to be placed in an operational condition, travel costs between the Carderock and Annapolis, and Philadelphia and Annapolis sites will be incurred at a rate proportional to the facility's utilization rate.

BSAT REQUEST FOR CLARIFICATION --- DJD 010

ATTACHMENT II

REQUEST FOR CLARIFICATION BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DID 010

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. Please forward a map of the Annapolis site (one similar to that provided for Data Call #5 is sufficient) showing the location of the Deep Ocean Pressure Simulation Facility, Submarine Fluid Dynamics Laboratory, fuel storage and refueling site used by the Naval Academy, and the facilities used to supply water to North Severn Navy housing.
2. Clarify the facilities to be mobilized under each scenario. Faxed response to RFC DID 09 states "the only facility proposed for mobilization status is the Deep Ocean Machinery and Vehicle Pressure Simulation Facility." Yet, page 1-3 states the Submarine Fluid Dynamics Laboratory would be mobilized. Is it part of the Deep Ocean Facility or colocated with it?
3. Scenario 3-20-0198-35A cites the cost for partial replication of the MPL. Scenario 3-20-0207-42 cites the cost for the partial replication of the MSP. Faxed response to RFC DID 08 quoted an approximate cost of \$20 M for fully replicating the two facilities at another site, like Carderock. Does "fully replicate" mean that the total sum moved to Carderock would exceed the proposed scenario combinations of the MSP and MPL at either Annapolis or White Oak?
4. Given that the MPL's estimated relocation cost to White Oak is \$5M and the MSP's cost to move to Annapolis is \$2M, would it be reasonable to apportion the MPL's move to Carderock at \$14M and the MSP's move at \$6M, for a total of \$20M? This is derived by a simple apportionment of the total cost by an approximate 5:2 ratio between the facilities.

I need this information by 1000, 6 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected papers FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: Please see attached pages

Mr Metrey
Name

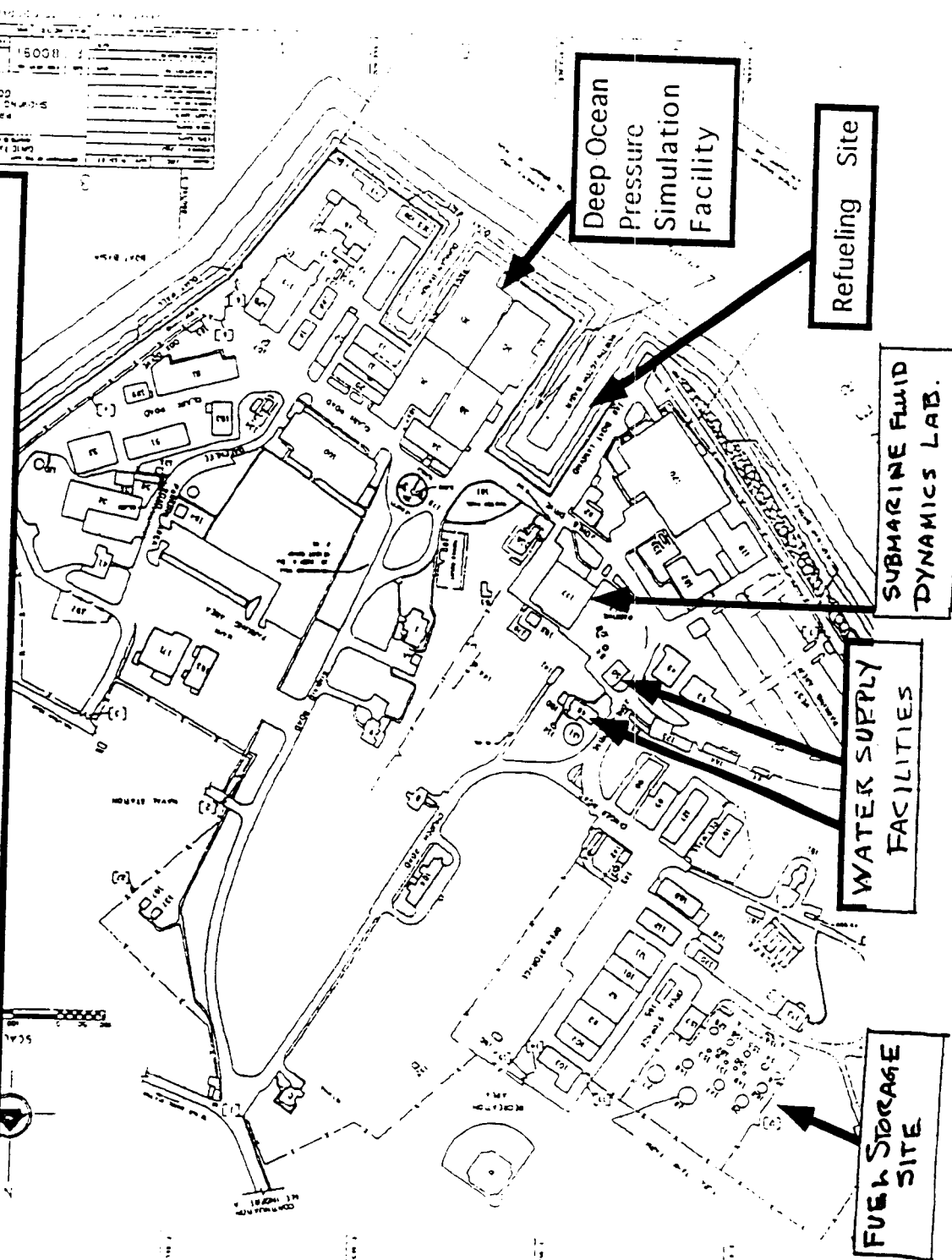
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Code

30-227-1628
Commercial Phone #

12/6/94
Date

Control # DJD 010 NSWC Carderock Division (Annapolis)

Please forward a map of the Annapolis site showing the location of the Deep Ocean Pressure Simulation Facility, Submarine Fluid Dynamics Laboratory, fuel storage and refueling site used by the Naval Academy, and the facilities used to supply water to the North Severn Navy housing.



(1)

DJD - 010

2. **QUESTION:** Clarify the facilities to be mothballed under each scenario. Faxed response to RFC DJD 09 states "the only facility proposed for mothball status is the Deep Ocean Machinery and Vehicle Pressure Simulation Facility." Yet, page 1-3 states the Submarine Fluid Dynamics Laboratory would be mothballed. Is it part of the Deep Ocean Facility or colocated with it?

Response. The response to RFC-DJD-09 is correct that the only facility proposed for mothball status is the Deep Ocean Machinery and Vehicle Pressure Simulation Facility in both scenarios 3-20-0198-035 and 035A. No reference to mothballing the Submarine Fluid Dynamics Laboratory can be found in 3-20-0198-035. There was reference to this in an earlier Scenario 3-20-0198-035A submission (dated 30 Nov 94) on page 1-3. However, this was removed in the certified re-submittal of 3-20-0198-035A responding to Control Number DJD-06, which was submitted on 3 December via the chain of command. The Submarine Fluid Dynamics Laboratory is not part of the Deep Ocean Facility and is not colocated with it.

A copy of page 3 of the latest submittal of 3-20-0198-035A is attached with the relevant statement underlined for reference.

3. **QUESTION:** Scenario 3-20-0198-35A cites the cost for partial replication of the MFL. Scenario 3-20-0207-42 cites the cost for the partial replication of the MSF. Faxed response to RFC DJD 08 quoted an approximate cost of \$20M for fully replicating the two facilities at another site, like Carderock. Does "fully replicate" mean that the total sum moved to Carderock would exceed the proposed scenario combinations of the MSF and MFL at either Annapolis or White Oak.

Response. No. The sum of the technical capabilities moved to Carderock do not exceed the proposed scenario combinations of the MSF and MFL at either Annapolis or White Oak cited in Scenario 3-20-0207-42 and Scenario 3-20-0198-35A, respectively. The Carderock Site presently has no facilities/capabilities that support electromagnetic signature reduction and silencing Research, Development, Test and Evaluation of steel hulled ships, minesweepers, and minesweeper machinery. The present White Oak Facility is located in a magnetically quiet area and includes means to control the magnetic field environment very accurately and conduct sensitive measurements of scaled ship models. In Scenario 3-20-0198-35A, which closes Annapolis, the augmentation of the existing White Oak Facility to handle the operation of actual minesweeper machinery (engines, generators, etc.) and to handle large submarine magnetic models is proposed at a cost of \$5M. This replicates the Annapolis capabilities not now at White Oak.

The present Annapolis facility is in a magnetically quiet area and includes means to control the magnetic field environment very accurately to conduct sensitive measurements of the signature of actual operating minesweeper equipment (including

services, fuel, exhaust, loads, etc.), and to measure the signature of large scaled submarine magnetic models. In Scenario 3-20-0207-42, the White Oak capabilities cited above are replicated by augmenting the Annapolis facility at a cost of \$2M.

Finally, if the capabilities of both the White Oak Magnetic Silencing Facility and the Annapolis Magnetic Fields Laboratory must be fully replicated from scratch at a third site such as Carderock, as cited in RFC-DJD-08, the total estimated cost of approximately \$20M is less than the cost of totally replicating both facilities independently due to similarities in the basic capabilities of the two facilities regarding magnetic field control and measurement.

In summary, in all three cases, the resulting facilities at the receiving site would have the same capability and would meet the Navy's total critical electromagnetic RDT&E requirements.

4. **QUESTION:** Given the MFL's estimated relocation cost to White Oak is \$5M and the MSF's cost to move to Annapolis is \$2M, would it be reasonable to apportion the MFL's move to Carderock at \$14M and the MSF's move at \$6M, for a total of \$20M? This is derived by a simple apportionment of the total cost by an approximate 5:2 ratio between the facilities.

Response. No. In attempting to apportion costs for replication of the White Oak MSF and the Annapolis MFL in a combined facility at Carderock, the commonality of the two should be considered. In order to be consistent with the various data calls, including the Annapolis Site Data Call 5, the total estimated replication cost of \$20M is distributed per the replication of the Annapolis MFL for \$14.5M with augmentation of \$5.5M to include replication of the White Oak MSF capabilities.

BSAT REQUEST FOR CLARIFICATION -- DJD 011

ATTACHMENT II

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (DSAT)

Page 9 of 10

110 CTA # K01503

Activity: NSWC Cardstock Div (Amnapolls)

ATTN: Jim Logan or Judith Atkins
Fax: 703-602-0541

CLASSIFICATION / CORRELATION REQUESTED for Scientific Development Data (Call # 1-20-01911-035 and 035A)

1. The fiscal response to RRC DAD 08 shows 106 billets moving absolute with the seven critical facilities. Scenario 035A cites 281 billets (not including the JSC personnel) moving with the 7 facilities. Finally the additional 175 billets not associated with the 7 critical facilities by technical function. Explain why it is necessary to the Navy that the 175 billets relocate. The RSTC is ensuring that only those technical personnel necessary to conduct official Government functions are relocated -- the former same further personnel eliminations may be in order for J201 proposed execution.
2. How many personnel are required to operate the inland water facilities?
3. With the exception of the manned vehicle testing last conducted in 1993, what types of testing have been conducted over the past five years that could not have been conducted elsewhere?
4. The Office Chief regarding to Canteen. Evidently the bill is important, but is it necessary? This bill is sure to be evaluated by the DIBC. An advisor above, only necessary functions are to be relocated. Please consider this better once again in that context. If the decision is that it is necessary, provide justification if different than the one already provided. I need this information by 1800, 6 December.

0260-189 (C02) 8010X01 1101

11/11/2011 11:11 AM

RA-X a preliminary response directly to the DSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the DSAT. Official documentation must be marked to support your response and be available for validation by the Naval Audit Service. Please see attached sheets.

night: Please see attached sheets

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TOTAL P. 33

11 - 49

1. **QUESTION:** The faxed response to RFC-DJD-08 shows 106 billets moving associated with the seven critical facilities. Scenario 035A cites 281 billets (not including the JSC personnel) moving with the 7 facilities. Justify the additional 175 billets not associated with the 7 critical facilities by technical function. Explain why it is necessary to the Navy that the 175 billets relocate. The BSEC is ensuring that only those technical personnel necessary to conduct critical government functions are relocated -- therefore some further personnel eliminations may be in order for both proposed scenarios.

Response. In the Scenario -35 response, the Carderock Division, NSWC had interpreted that as the BSAT Scenario provided for the consolidation of the Machinery functions at the Philadelphia site, a detailed explanation of the realigned functions was not required or allowed.

However, the Carderock Division took the opportunity in Scenario -35A, to describe the full capabilities moving to Philadelphia not just those related to the 6 facilities. (The Magnetics capability moving to White Oak was also fully described making a total of 7 facilities.)

The table below shows how the personnel to be relocated to Philadelphia are allocated to the technical capabilities.

Technical Capability	Total Personnel Relocating (Note 1.)	Personnel Performing Inherently Governmental Functions	Personnel Related to the 6 Critical Facilities to be Relocated to Philadelphia
Advanced Propulsion Machinery R&D	25	16	9
Advanced Auxiliary Machinery (including Pulsed Power) R&D	101	76	25
Advanced Electric Machinery R&D	82	59	23
Machinery Acoustic Silencing R&D	53	21	32
Sea Survival/Life-Saving Systems	Note 2.	Note 2.	Note 2.
Totals	261	172 (Note 3.)	89

Note 1. Total personnel listed in Scenario -35A Section 2-B(1) justifications are the actual FY93 personnel related to each technical capability above and as a result are slightly different from the numbers in this table.

Note 2. This function is transferred to Philadelphia without any personnel.

Note 3. In Scenario -35, the 175 personnel relocated included 172 to Philadelphia and 3 to Carderock. An additional 16 personnel were moved to White Oak.

Scenario -35 proposes the relocation to Philadelphia of the 172 personnel performing the inherently governmental functions related to propulsion, auxiliary and electrical machinery, and machinery silencing. These functions are both critical to the development of advanced technology for future ships and submarines and critical for the execution of Navy machinery programs.

Personnel Performing Inherently Governmental Functions include positions, such as program management, awarding, directing and monitoring development contracts, generating performance or cost assessments, or recommending design improvements or corrective actions which can be performed without requiring the operation of the facilities now located at Annapolis.

The expertise embodied by these personnel does not exist elsewhere in government or industry.

2. **QUESTION: How many personnel are required to operate the potable water facilities?**

Response. It takes 5 personnel to operate the water plant. There are 4 water plant operators and 1 supervisor. The operators stand an 8 hour watch and rotate through shifts. The supervisor handles supervision, record keeping, and is available to allow for leave or emergent requirements for an additional person.

3. **QUESTION: With the exception of the manned vehicle testing last conducted in 1983, what types of testing have been conducted over the last five years that could not have been conducted elsewhere?**

Response. The following types of testing that could not have been conducted elsewhere and have been performed over the last five years are as follows:

Vehicles

Qualifying and evaluating vehicles such as Cable Controlled Underwater Recovery Vehicle (CURV), ORION, etc. require high pressure (10,000 - 12,000 psi), size (10 ft diameter, 27 ft length) and horizontal orientation.

Deep Ocean Machinery Systems

Qualifying and evaluating deep ocean machinery system such as the SSN-21 Secondary Propulsion Unit, Deep Submergence Electric Power Distribution System, etc. require a horizontal orientation, heat removal capability and size (10 ft diameter, 27 ft length).

Cable Systems

Evaluation of cable designs such as the Advanced Tethered Vehicle Cable and an assortment of fiber optic cables require high pressure (12,000 psi), size (10 ft diameter, >10 ft length) and horizontal orientation.

Materials

Evaluation of composite materials such as ceramic and titanium pressure vessels and ceramic compaction process require high pressure (10,000 - 12,000 psi) and size (10 ft diameter, 27 ft length).

Special Testing

Evaluation of sonar aperture and hydrophone array panels require low noise - high pressure environment. Due to its unique fabrication, the tank is inherently acoustically quiet.

The following table is a log of tests performed over the past five years that could not be performed elsewhere.

TESTS REQUIRING SPECIAL CAPABILITIES OF THE DEEP OCEAN PRESSURE SIMULATION FACILITY

(10 ft diameter, 27 ft length/Working Pressure 12,000 psi/Horizontal Orientation)

Note: More than 50-percent of the tests conducted in the facility are performed either directly for Navy sponsors or for contractors for the benefit of Navy programs.

DATE	TEST	SPONSOR
1-89	Ceramic compaction (requires size and pressure of the facility)	Coors Ceramics
9-89	Orion cable (requires size and pressure of the facility)	Oceaneering
4-90	CURV (requires size and pressure of the facility)	Oceaneering
6-90 thru 7-90	Noise test (test required a quiet test vessel)	Carderock
11-90	ATV cable (requires size and pressure of the facility)	NOSC
11-90	Rubber panels (size requirement and required quiet tank)	Carderock

DATE	TEST	SPONSOR
10-91	Fiber optic cable (requires size and pressure of the facility)	AT&T Bell Labs
10-91	AT&T SPAWAR (requires size and pressure of the facility)	Navy
11-92	Fiber optic cable (requires size and pressure of the facility)	AT&T Bell Labs
11-92	Westinghouse ceramic (requires orientation, size and pressure of the facility)	Westinghouse
11-92	SSN-21 Secondary Propulsion Unit (requires size and orientation of the facility)	Westinghouse
1-93	Fiber optic cable (requires size and pressure of the facility)	Simplex
4-93	NCEL plow test (requires orientation of the facility)	NCEL
4-93	SSN-21 Secondary Propulsion Unit (requires orientation of the facility)	Westinghouse
5-93	Sea Cliff electrical distribution system (manned submersible components evaluation and qualification)	Lockheed
6-93	Fiber optic cable (requires size and pressure of the facility)	AT&T Bell Labs
8-93	ISMS system (requires orientation of the facility)	Oceaneering
9-93	AT&T SPAWAR (requires pressure of the facility)	AT&T Bell Labs
9-93	ISMS System (requires orientation of the facility)	Oceaneering
10-93	Ceramic vessel tech (requires size and pressure of the facility)	Westinghouse
1-94	Fiber optic cable (requires size and pressure of the facility)	Rochester Cable
5-94	Fiber optic cable (requires size and pressure of the facility)	Rochester Cable

DATE	TEST	SPONSOR
6-94	Fiber optic cable (requires size and pressure of the facility)	AT&T Bell Labs
7-94	Holding tank (requires pressure of the facility)	Westinghouse
12-94	Preparation for Sea Cliff manipulator ((requires size of the facility)...manned submersible components)	Navy/Battelle

4. **QUESTION:** The Officer billet relocating to Carderock. Evidently the billet is important, but is it necessary? This billet is sure to be evaluated by the BSEC. As advised above, only necessary functions are to be relocated. Please consider the billet once again in that context. If the decision is that it is necessary, provide justification that is different than the one already provided.

Response. The relocation of the officer billet to Carderock is considered very important by the Carderock Division, but it is not "necessary".

BSAT REQUEST FOR CLARIFICATION -- DJD 012

ATTACHMENT II

DEC 05 1994 07:05 PM NSWC

P.33

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DDD 012

Activity: NSWC Carderock Div (Annapolis)

Date sent: 5 Dec 94

ATTN: Jim Logan or Judith Aklis

Fax: 703-602-0341

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and B55A:

RE: NSWC Carderock fax dated 30 Nov 94

1. The fax identified personnel moved and eliminated by function for the baseline and alternative scenarios. The totals shown for "start, moved, and eliminated" do not match the totals presented on Table 2-17 of the data calls for both scenarios. Please explain and resolve the difference.

I need this information by 1800, 6 December.

 Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 755-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be returned to support your response and be available for validation by the Naval Audit Service.
Reply. Please see attached sheets

Mr. Metrey
Name

4101
Code

301-227-1628
Commercial Phone #

12/6/94
Date

1. **QUESTION:** *RE: NSWC Carderock fax dated 30 November 1994:* The fax identified personnel moved and eliminated by function for the baseline and alternative scenarios. The totals shown for "start, moved, and eliminated" do not match the totals presented on Table 2-D of the data calls for both scenarios. Please explain and resolve the difference.

Response. The tables submitted with NSWC-Carderock fax dated 30 November 1994 were incorrect in that they only indicated NSWC Annapolis personnel (excluding Joint Spectrum Center personnel) and improperly assumed that BRAC-91 actions had been completed. Corrected tables are attached.

NSWC ANNAPOLIS---SCENARIO 35
UIC 61533

CIVILIAN STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	1	0	0	0	1	0
Comptroller	2	-2	0	0	0	0
Admin	7	-6	0	0	1	0
Human Resource	4	-4	0	0	0	0
Supply Management	20	-18	0	0	2	0
Computational Support	3	-3	0	0	0	0
Info Sys/Communications	1	-1	0	0	0	0
Safety/OSH/Environ	4	-3	0	0	1	0
Physical Security	9	0	0	0	9	0
Public Works	105	-63	0	0	42	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other	0	0	0	0	0	0
Technical Operations	569	-194	-13	190	172	0
Total Annapolis	725	-294	-13	190	228	0
Joint Spectrum Center	115	0	0	115	0	0
Totals	840	-294	-13	305	228	0

DJD 012

NSWC ANNAPOLIS---SCENARIO35
UIC 61533

OFFICER STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	1	0	0	0	1	0
Comptroller	0	0	0	0	0	0
Admin	0	0	0	0	0	0
Human Resource	0	0	0	0	0	0
Supply Management	0	0	0	0	0	0
Computational Support	0	0	0	0	0	0
Info Sys/Communications	0	0	0	0	0	0
Safety/OSH/Environ	0	0	0	0	0	0
Physical Security	0	0	0	0	0	0
Public Works	0	0	0	0	0	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other						0
Technical Operations	1	0	0	1	0	0
Total Annapolis	2	0	0	1	1	0
Joint Spectrum Center	11	0	0	11	0	0
Totals	13	0	0	12	1	0

NSWC ANNAPOLIS---SCENARIO -35
UIC 61533

ENLISTED STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	0	0	0	0	0	0
Comptroller	0	0	0	0	0	0
Admin	0	0	0	0	0	0
Human Resource	0	0	0	0	0	0
Supply Management	0	0	0	0	0	0
Computational Support	0	0	0	0	0	0
Info Sys/Communications	0	0	0	0	0	0
Safety/OSH/Environ	0	0	0	0	0	0
Physical Security	0	0	0	0	0	0
Public Works	0	0	0	0	0	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other						0
Technical Operations	0	0	0	0	0	0
Total Annapolis	0	0	0	0	0	0
Joint Spectrum Center	8	0	0	8	0	0
Totals	8	0	0	8	0	0

DJD 012

NSWC ANNAPOLIS---SCENARIO -35
UIC 61533

TOTAL STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	2	0	0	0	2	0
Comptroller	2	-2	0	0	0	0
Admin	7	-6	0	0	1	0
Human Resource	4	-4	0	0	0	0
Supply Management	20	-18	0	0	2	0
Computational Support	3	-3	0	0	0	0
Info Sys/Communications	1	-1	0	0	0	0
Safety/OSH/Environ	4	-3	0	0	1	0
Physical Security	9	0	0	0	9	0
Public Works	105	-63	0	0	42	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other	0	0	0	0	0	0
Technical Operations	570	-194	-13	191	172	0
Total Annapolis	727	-294	-13	191	229	0
Joint Spectrum Center	134	0	0	134	0	0
Totals	861	-294	-13	325	229	0

DJD 012

5

NSWC ANNAPOLIS---SCENARIO -35A
UIC 61533

CIVILIAN STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	1	0	0	0	1	0
Comptroller	2	-2	0	0	0	0
Admin	7	-6	0	0	1	0
Human Resource	4	-4	0	0	0	0
Supply Management	20	-18	0	0	2	0
Computational Support	3	-3	0	0	0	0
Info Sys/Communications	1	-1	0	0	0	0
Safety/OSH/Environ	4	-3	0	0	1	0
Physical Security	9	0	0	0	9	0
Public Works	105	-63	0	0	42	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other	0	0	0	0	0	0
Technical Operations	569	-194	-13	280	82	0
Total Annapolis	725	-294	-13	280	138	0
Joint Spectrum Center	115	0	0	115	0	0
Totals	840	-294	-13	395	138	0

DJD 012

NSWC ANNAPOLIS---SCENARIO -35A
UIC 61533

OFFICER STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	1	0	0	0	1	0
Comptroller	0	0	0	0	0	0
Admin	0	0	0	0	0	0
Human Resource	0	0	0	0	0	0
Supply Management	0	0	0	0	0	0
Computational Support	0	0	0	0	0	0
Info Sys/Communications	0	0	0	0	0	0
Safety/OSH/Environ	0	0	0	0	0	0
Physical Security	0	0	0	0	0	0
Public Works	0	0	0	0	0	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other						0
Technical Operations	1	0	0	1	0	0
Total Annapolis	2	0	0	1	1	0
Joint Spectrum Center	11	0	0	11	0	0
Totals	13	0	0	12	1	0

DJD 012

7

NSWC ANNAPOLIS---SCENARIO -35A
UIC 61533

ENLISTED STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	0	0	0	0	0	0
Comptroller	0	0	0	0	0	0
Admin	0	0	0	0	0	0
Human Resource	0	0	0	0	0	0
Supply Management	0	0	0	0	0	0
Computational Support	0	0	0	0	0	0
Info Sys/Communications	0	0	0	0	0	0
Safety/OSH/Environ	0	0	0	0	0	0
Physical Security	0	0	0	0	0	0
Public Works	0	0	0	0	0	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other						0
Technical Operations	0	0	0	0	0	0
Total Annapolis	0	0	0	0	0	0
Joint Spectrum Center	8	0	0	8	0	0
Totals	8	0	0	8	0	0

DJD 012

NSWC ANNAPOLIS---SCENARIO -35A
UIC 61533

TOTAL STAFF

	Start	Prior BRAC	Force	Moved	Eliminated	End
	Begin FY96	Impacts	Struct Change			FY2001
Command	2	0	0	0	2	0
Comptroller	2	-2	0	0	0	0
Admin	7	-6	0	0	1	0
Human Resource	4	-4	0	0	0	0
Supply Management	20	-18	0	0	2	0
Computational Support	3	-3	0	0	0	0
Info Sys/Communications	1	-1	0	0	0	0
Safety/OSH/Environ	4	-3	0	0	1	0
Physical Security	9	0	0	0	9	0
Public Works	105	-63	0	0	42	0
Fire Protect	0	0	0	0	0	0
Med/Dental	0	0	0	0	0	0
Air/Waterfront Ops	0	0	0	0	0	0
Other	0	0	0	0	0	0
Technical Operations	570	-194	-13	281	82	0
Total Annapolis	727	-294	-13	281	139	0
Joint Spectrum Center	134	0	0	134	0	0
Totals	861	-294	-13	415	139	0

DJD 012

9

11-63A

BSAT REQUEST FOR CLARIFICATION -- DJD 013

ATTACHMENT II

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 013

Received: 0808 Hrs; 7 Dec 94

Due: 1200 HRS; 7 Dec 94

1. "Although I understand that some amplifying assumptions were necessary, contract termination costs that are exactly the same for two fundamentally different scenarios is not reasonable, especially when one retains so much more of the technical work. On the other hand, it is reasonable to assume that because the alternative proposes transferring R&D functions to Philadelphia, Carderock, White Oak, and NRL, any contracts performed in these areas are likely to be modified to change the service site or shipping destination. In lieu of determining on a contract-by-contract basis how much of the \$16.9M in claimed termination costs is inappropriate to the alternative, provide a percentage of Annapolis contracting load for each technical function proposed for relocation. Given the assumption that termination costs are spread evenly among all technical functions -- retained and cancelled -- a reasonable answer can be derived."

Response:

Please see response to question #2

2. "If one is available, I also open to a better idea that arrives at a satisfactory solution. I believe it is better to arrive at a satisfactory solution now rather than have the BSEC mandate one when there will be even less time to perform the necessary work to arrive at one."

Response:

There are thirteen major facilities that have contract costs at the Post-BRAC 91 NSWC Annapolis Detachment. Six of the thirteen major facilities are not proposed to be moved to be moved under the alternative Scenario 3-20-0198-35A. Assuming a straight line apportionment of the contract termination costs across all the major facilities, a factor of 0.4615 (i.e. 6/13ths) may be used to determine the contract termination costs

<u>FY</u>	<u>Scenario "035"</u>	<u>Scenario "035A"</u>
1996	\$11,200K	\$ 5,169K
1997	\$ 4,700K	\$ 2,169K
1998	\$ 1,000K	\$ 462K

REQUEST FOR CLARIFICATION AND SENSITIVE ANALYSIS TEAM (RSAT)

Date sent: 6 Dec 94

Contact: DHD 013
 Activity: NSWC Cardstock Div (Comptrols)

ATTN: Jim Logan or Jimlin Atkins
 Fax: 703-602-3541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035A:

1. Although I understand that some shipbuilding manufacturing was necessary, contract cancellation costs that are *exactly* the same for two fundamentally different activities is not reasonable, especially when one activity is much more of the different work. On the other hand, it is reasonable to assume that because the activities performed by them were no likely to be modified to change the service or shipbuilding, that the cost of designing on a contract-by-contract basis was much in the \$1.6M in claimed termination costs is disproportionate to the shipbuilding, providing the percentages of shipbuilding contract and for each technical function projected for relocation. Given the assumption that termination costs are spread evenly among all technical functions -- reduced and cancelled -- a reasonable answer can be derived.

2. If one is available, I'm also open to a better idea that makes at a satisfactory solution. I believe that the better to arrive at a satisfactory solution now, either that have the ASIC models and which there will be even less likely to return the necessary work to arrive at one.

I need the information by 1200, 7 December.

Don DeVoung (703) 681-0478
 NOTE: The information requested originally. Request you respond with clarification comments (below) or detached page(s). I'm a preliminary response directly to the ASAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the NSAT. Official documentation must be related to support your response and be available for validation by the Naval Audit Service.

NAME	RE MEYER
CODE	01
COMMUNICAL NUMBER	301 227 1628
DATE	7 DEC 94

BSAT REQUEST FOR CLARIFICATION -- DJD 014

ATTACHMENT II

DEC-07-94 WED 12:06

CDNSWC, ANNAPOLIS DET.

FAX NO. 410 293 2638

P.02/06

12/07/94 08:16

0001 007 503

NSWC-CASD-011

0003/004

12/07/94 08:16

0001 007 503

P.02/06

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)
Control & DDP DIA
Activity: NSWC Cranebrook Div (Annapolis)
ATTN: Tim Logan or Judith Atkins
Fax: 703-602-0541
CLARIFICATION / CORRECTION REQUESTED for Secure Deployment Data Call # 3-20-0198-035A:
1. How else might the Navy's need to conduct high pressure, acoustic measurements of submarine hulling and reduced plier systems be satisfied if the Annapolis capability is closed?
2. How else might the Navy's need to identify, assess, specify, validate, and direct development of technologies in the areas of cyborgs, superconductivity, and power electronics be satisfied if the Annapolis capability is closed?
3. How else might the Navy's need for cooling system developments pertaining to CFC refrigerants be satisfied if the Annapolis capability is closed? Data Call #5 states that "those facilities are only duplicated (some: when) at the largest of the major and confounding manufacturing plants, although facilities are tailored to the unique Naval application of water heat rejection over a wide range of water temperatures." Is it possible to overcome the necessary development work to the A/C manufacturers or to some other contractor using the manufacturer's facilities?

I need this information by 1200, 7 December.
NOTE: This information is needed urgently. Request your response with clarification comments (below) or corrected page(s). If a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be returned to support your response and be available for validation by the Naval Audit Service.
Reply:

Name	Code	Commercial Phone #	Dmc
R. E. MEYER	01	301-227-1628	7 DEC 94

1. **QUESTION: How else might the Navy's need to conduct high pressure acoustic measurements of submarine ballasting and related piping systems be satisfied if the Annapolis capability is closed?**

Response: There is no existing capability in government or industry which can perform this capability if Annapolis is closed.

The only alternative is to replicate this facility and the associated skilled personnel elsewhere to meet the Navy's need to conduct high pressure acoustic measurements of submarine ballasting and related piping systems. Annapolis is the only known facility with the capability for full scale evaluations at shipboard operational conditions of air, water, and hydraulic systems and components without contaminating acoustic interference from supporting systems such as pumps and compressors. Steady state and transient noise signatures are measured concurrently with mechanical conditions and operations. System background noise levels and analysis equipment are designed for the evaluation of components for the world's quietest ships. The facility is capable of establishing deballasting parameters and certification of SUBSAFE components which are critical for submarine safety and in support of design agents and shipbuilders.

The estimated cost of replacing this facility at a different site is \$15.0 M. Relocation costs are estimated to be \$8.64M if accomplished by land or \$1.64M if by water, not including the 5 key personnel. (The large high pressure tank can only be moved by barge. Replacement cost of the tank is \$7M.)

2. **QUESTION: How else might the Navy's need to identify, assess, validate, and direct development of technologies in the areas of cryogenics, superconductivity, and power semiconductors be satisfied if the Annapolis capability is closed?**

Response: **Power semi-conductor R&D** capability exists in both private industry and universities. The Annapolis contributions in this area are keyed to those specific issues which are unique to military requirements, such as establishing and validating derating factors and stress limits, guiding and coordinating contracted R&D with industry and academia, assuring coordination with other government agencies, and translating system requirements into R&D goals. This Annapolis capability does not exist elsewhere and can not be contracted since it is an inherently governmental function.

In order to retain the power semiconductor capability, it should be located with the Navy group doing Electrical Power Systems R&D which is relocated to Philadelphia in Scenario 035A; since it is critical to have strong, real-time interaction between the semiconductor and system technologies. In order to maintain the capability, transfer the equipment required to complete this capability to Philadelphia. Estimated one time unique cost to move this facility which include specialized power semiconductor characterization equipment and laboratory instrumentation and equipment is approximately \$250K.

Although basic research capability exists at some government laboratories in **superconductivity and cryogenics**, and design and manufacturing capability exist in industry, Annapolis is the only organization which has the combination of experienced personnel and facilities required to address and objectively evaluate technology for power applications of these technologies. Maintaining this expertise is essential for the specification and evaluation of superconducting electric machinery for Navy ships and submarines of the future.

The expertise in the technology areas of cryogenics and superconductivity for power applications in the Navy is exclusive to the Annapolis Detachment. There are 10 key engineers and scientist with over 150 years of total experience in this area associated with facility intensive work. It would be necessary to relocate these personnel with facilities to retain this capability, preferably to Philadelphia to retain the synergism with related machinery and electrical capabilities. The relocated individuals require key laboratory facilities to support their efforts which are not available in the industrial or university base. These unique facilities which have been designed, built, and utilized for specific Navy needs include such things as shock and vibration apparatus for superconducting magnets, magnet stability energy-to-quench measuring devices and developmental cryogenic refrigeration systems. One time unique cost to relocate facilities is \$4M excluding site preparation.

3. **QUESTION: How else might the Navy's need for cooling system developments permitting non-CFC refrigerants be satisfied if the Annapolis facility is closed? Data Call #5 states that "these facilities are only duplicated (somewhat) at the largest of the major air conditioning manufacturer's plants, although facilities are tailored to the unique Naval application of water heat rejection over a wide range of water temperatures." Is it possible to outsource the necessary development work to the A/C manufacturers or to some other contractor using the manufacturer's facilities?**

Response: There is no way to accommodate the Navy's cooling system development needs if NSWC Annapolis is closed or if the program is delayed as a result of relocation of this facility to another site. An explanation is provided below.

Shipboard combat systems are cooled by vapor compression air conditioning plants. Ships cannot function without this vital cooling. The bulk of the fleet uses CFC-114 refrigerant in these cooling systems. The Navy is the major user of CFC-114 in this application and has approximately 850 large units in the fleet ranging in size from 125-363 tons of cooling. The Navy is the only entity searching for a suitable, environmentally acceptable replacement for CFC-114.

In 1987, concerns about the depletion of the earth's protective ozone layer led to an international agreement, the Montreal Protocol, which began the process of controlling the production of CFCs. Continuing depletion of the ozone layer led to President Bush's 1992 decision to order a complete ban on CFC production effective January 1, 1996. This accelerated phase out resulted in the Navy accelerating the development of facilities and staff capabilities at NSWC Annapolis to solve this

problem.

The Navy has established a limited stockpile of CFCs to satisfy the fleet needs until all fleet units are converted to CFC-free refrigerants. The size of the CFC-114 stockpile was based on conversion of fleet units beginning in FY 98 and continuing through FY 08. The conversion schedule was predicated on successful and rapid prosecution of the R&D program at NSWC Annapolis.

Any delay in the prosecution of the R&D program will result in a conversion program delay which in turn will prematurely deplete the stockpile. Defense Logistics Agency (DLA), the manager of the stockpile, has advised the Navy that further procurements of CFC-114 are unlikely since the CFC manufacturers have already committed their CY 95 final production allocation. Reinstating CFC production requires agreement by the parties to the Montreal Protocol.

York International is the Navy's sole supplier of CFC-114 air conditioning plants and is the only supplier with the necessary skilled staff and limited facilities to continue this work if NSWC Annapolis were to close. However, York is currently aggressively pursuing their commercial CFC replacement work, which does not include CFC-114, (nationwide there are 80,000 air conditioning plants that must be converted or replaced) and has limited personnel and facilities available for other pursuits. York International's Marine group is currently performing on six large NSWC Annapolis contracts for the development of new CFC-free air conditioning and refrigeration plants for future ship construction programs - DDG 51 IIA, LPD 17, CVN 76 and NSSN. These contract efforts have consumed York's current staff and their new hires.

The reassignment of all of the CFC elimination work to York will require the expansion and modification of York's facilities and the movement of the fleet hardware currently at NSWC Annapolis. The cost of facility replication and equipment movement alone is estimated at \$11.2M. The time to replicate facilities, the loss of the skilled experienced staff at Annapolis, the acquisition and training of additional staff at York will result in significant program disruption. The resultant minimum two year delay in the program will require an additional 400,000 lbs of CFC-114 for the stockpile at a cost of \$4.8M as a minimum. As stated above, it is unlikely that this additional quantity can be procured.

Outsourcing the work to another contractor using the York facilities is extremely unlikely and the program disruption and consequences described above could be even more severe.

BSAT REQUEST FOR CLARIFICATION -- DJD 015

ATTACHMENT II

DEC DEC 02 '94 08:55AM NSWQV RSAT

FAX NO. 7037582174

25

REQUEST FOR CLARIFICATION HASH STRUCTURE ANALYSIS TEAM (DSAT)

Datum sent: 6 Dec 94

Control # DJD015
Activity: NBVC Carbonat Dk (Amnopolis)

ATTN: Sir/Lady or English Admin
Fax: 702-602-0541

CLAIMS SECTION / CONNECTION DEVELOPMENT Data Call # 3-204198-035 and 035A:

1. Estimate the cost of relocating the Deep Ocean Pressure Simulation Facility at NSWCCardstock. Also, estimate the cost of bringing the facility out of mothball status for a single test.
2. Estimate the annual cost of maintaining the Submarine Pinn Dynamics Laboratory in a mothball status. Estimate the cost of bringing the facility out of mothball status for a single test.

I need this information by 12th, 7 December:

~~Don DeYoung~~ (703) 681-4778

NOTICE: This information is needed urgently. Request your response (below) or corrected page(s). FAX a preliminary response directly to the DEAT at (703) 756-2179. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the DEAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Only SEE ATTACHED SHEET

R. F. METREY
Name

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control # DJD 015

Received: 08:55EST 7 Dec 94

Due: 12:00EST 7 Dec 94

1. The below questions apply:

- a. **"Estimate the cost of relocating the Deep Ocean Pressure Simulation Facility at NSWC Carderock."**

Response:

The Deep Ocean Pressure Simulation Facility can only be moved by barge. It is 27 ft long by 10 ft inside diameter and weighs approximately 850 tons. As a consequence, it cannot be relocated to the Carderock Site. Barges can not navigate up the Potomac River as far as the Carderock site.

As it was originally barged from the Philadelphia region, it could be moved to the Philadelphia site. The removal of the tank from the Annapolis site would require the acquisition of a special barge or dredging near the dock area, due to draft limitations, as well as a mechanism to move the mass of the tank onto the barge. Adequate industrial facilities exist at the Philadelphia site for removal of the tank and its subsequent handling to final placement. In addition, it should be noted, that the movement of the pressure vessel in Philadelphia would require a location near the docks. Movement of the vessel over standard road construction is impractical. A cost estimate for this operation is not readily available.

- b. **"Also estimate the cost of bringing the facility out of mothball status for a single test."**

Response:

The cost of bringing the Deep Ocean Pressure Simulation Facility out of a mothball status for a test is estimated to be \$50K (4 personnel @ \$0.5K/man day for 20 days plus \$10K for a NAVFAC certification test).

This estimate is based upon the assumptions that the facility has had minimal deterioration during the moth ball period. In addition, it is assumed there is resident engineering knowledge on the operation and certification elements of the facility (at least 2 persons). If such qualified personnel are not available, then the time period would be significantly longer.

2. The below questions apply:

- a. **"Estimate the annual cost of maintaining the Submarine Fluid Dynamics Laboratory in a mothball status."**

Response:

The cost of placing the Class 2 real property housing the Submarine Fluid Dynamics Laboratory in mothball status is estimated at a one time cost of \$3.2K and an annual cost of \$31.0K. These numbers are based on a pro-rata share of the P-164 costs of placing the buildings that house the facilities in a "Reserve Status" (i.e. between "Abandonment" and "Ready Standby" in the P-164 document).

The cost of placing the Class 3/4 equipment within the Submarine Fluid Dynamics Laboratory in mothball status is estimated at a one-time unique cost of \$40K. This cost is in-lieu of a detailed engineering cost estimated.

- b. **Estimate the cost of bringing the facility out of mothball status for a single test."**

Response:

Assuming the high pressure vessel can be recertified by the Naval Facilities Command, the cost of bringing the facility out of mothball status will be dependent on the amount of deterioration which occurs in the of support systems (air flasks, computers, special piping and valves, etc.) contained in the facility. It is expected that some deterioration will occur.

Based upon our best engineering judgement, it is estimated that the cost of bringing the facility out of mothball status for a single test will be approximately one-tenth of the replacement cost of the facility's support systems per year the facility is mothballed.

<u>Support Systems</u>	<u>1/10-Replacement Cost</u>
Air storage flasks	\$ 150 K
Air compressors	\$ 80 K
Data acquisition system	\$ 100 K

Total	\$ 330 K

The magnitude of the deterioration will vary with the amount of time the system has been in a "mothball" status and hence the cost to bring the facility to operational status is expected to be \$ 330 K for each year the facility has mothballed.

BSAT REQUEST FOR CLARIFICATION -- DJD 016

ATTACHMENT II

REQUEST FOR CLARIFICATION BASE STRUCTURE ANALYSIS TEAM (BSAT)

Date sent: 7 Dec 84

Control # 010016
Activity: NSWC Cardstock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 701-602-0561

CLARIFICATION / CORRECTION REQUESTED for Scenario Development: Data Card # 3-21-0198-035 and 038A:

1. Estimate the cost of mounting the Submarine Fluid Dynamics Laboratory at NSWC Cardstock.
2. Estimate the cost of replacing the non-CFC laboratory facilities at other NSWC Cardstock or at an industrial site, whichever is most cost-effective.

I need this information by 1400, 7 December.

~~Don Do Young~~ (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2474. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.
Reply: Please see attached

R E METREY
Name

01 Code

301 227 1628
Commercial Phone #

7 DEC 94
Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 016

Received: 1005 Hrs; 7 Dec 94

Due: 1200 HRS; 7 Dec 94

1. "Estimate the cost of relocating the Submarine Fluids Dynamic Laboratory at NSWC, Carderock"

Response:

The Submarine Fluids Dynamic Laboratory consists of special piping, an acoustic isolated large high pressure tank, a bank of high pressure air flasks, several high pressure compressors, and related support equipment.

The high pressure tank is too large (60 ft long by 14 ft diameter) and heavy (70 tons) to move by land. Therefore, to move to the Carderock site, it would have to be replicated at the site. The total cost (excluding the moving costs for approximately 10 tons of equipment and the 5 personnel associated with the operation of this facility) is estimated at \$8.64M. This one-time unique costs are composed of the high pressure tank replication of \$7M; the labor costs for removal and re-installation of the various support equipments (e.g. high pressure air storage flasks and piping, high pressure compressors, data acquisition equipment, and other subsystems) at a cost of approximately \$0.66M; the replacement of the data acquisition system (\$0.5M); and the site preparation (\$0.48M).

2. "Estimate the cost of relocating the non-CFC laboratory facilities at either NSWC Carderock or at an industrial site, whichever is most cost-effective."

Response:

The cost of relocation of this capability from NSWC Annapolis to NSWC Carderock would include equipment relocation and facility replication (approximately \$11.2M), a MILCON for a suitable building and cooling "tower" (approximately 6,000 gallons per minute heat rejection requirement). Though no engineering analyses have been completed, a rough order of magnitude MILCON cost of \$10M is provided.

However, it should be noted that a relocation of the non-CFC laboratory would still require an interruption in the program and create delays as discussed in the response to DJD-014 of 6 December 94. As stated earlier, this program disruption would have an adverse impact upon the CFC stockpile and consequent mission capability.

BSAT REQUEST FOR CLARIFICATION -- DJD 017

ATTACHMENT II

REQUEST FOR CLARIFICATION

BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DJD 017

Date sent: 7 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jkm Logan or Judith Atkins

Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. Explain why the non-CIC work presently conducted at Annapolis can not be performed at a shipyard by Navy ISE personnel with the A/C manufacturers and other necessary contractors.

I need this information by 1400, 7 December.



Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: _____

R.E. METREY

Name

01

Code

501 227-1628

Commercial Phone #

7 Dec 94

Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 017

Received: 1345 Hrs; 7 Dec 94

Due: 1400 HRS; 7 Dec 94

1. "Explain why the non-CFC work presently conducted at Annapolis can not be performed at a shipyard by Navy ISE personnel with the A/C manufacturers and other accessory contractors."

Response:

The realignment of the non-CFC functions presently conducted at the NSWC Annapolis site would require, as a minimum, the below actions:

- a. Replication of the Annapolis non-CFC facilities and relocation of the installed fleet hardware at Annapolis at an estimated cost of \$11.2M.
- b. A suitable building with high floor loading, overhead crane, 6MW of electrical power and 6000 gallons/minute of cooling water;
- c. Recruitment of a R&D capable staff who are experienced in performing inherently governmental acquisition decisions in this technical area; and
- d. Appropriate lead times for training, equipment installation, and bringing the facility to an operational condition.

The potential realignment of these functions to an Navy ISE activity would not include any existing shipyards. The present activity for the performance of Machinery related ISE functions is the NSWC Philadelphia Detachment, Carderock Division.

With regards to the performance of this function by a contractor work force, it should be noted that many of the functions are inherently government responsibilities.

Regardless of any realignment of these functions, the reader should be reminded of the earlier responses to DJD-014 & DJD-016 of the adverse impact of any delay in the development and completion of the projects being undertaken by this activity at this time.

BSAT REQUEST FOR CLARIFICATION -- DJD 018

ATTACHMENT II

REQUEST FOR CLARIFICATION BASH STRUCTURAL ANALYSIS TEAM (BSAT)

Date sent: 7 Dec 94

Control # DDD 018

Agency: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Alkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Secure Development Data Call # 2-20-0194-035 and 035A:

1. Attachment 1: Base Loading Data (two attached) shows two errors that illustrated under Planned Base Structure Changes. Page 2-13 of both attachments does not show an error that being eliminated under Force Structure Changes. Should Attachment 1 be revised?

I need this information by 1800, 7 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). (VAX equivalentary responses directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and forward forwarding to the BSAT. Official documentation must be related to support your response and be available for validation by the Naval Audit Service.

Reply:

R. E. METREY

Name

OI

Cable

301 227 1628

Commodore Phone #

7 DEC 94

Date

Scenario 3-20-0198-035 & 035A

Reference: Control # DJD 018

Received

Due: 1800 HRS 7 DEC 1994

1. **Attachment I: Base Loading Data** (see attached) shows one officer billet eliminated under the proposed Force Structure Changes. Table 2-D of both scenarios does not show an officer billet being eliminated under Force Structure Changes. Should Attachment I be revised?

Response:

Yes. The revised Attachment I sheets are attached.

BSAT REQUEST FOR CLARIFICATION -- DJD 019

ATTACHMENT II

**REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)**

Control # DMD 019

Date sent: 7 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and (35A:

1. RE: Data Call 035A; page 3-1. The note mentions losing and gaining site estimates. If I understand it correctly the costs on p. 2-35 are the losing site estimates for the movement and reconstruction of the equipment. The \$320 K on p. 3-3 is the gaining site estimate for "clean out of the site, removal of existing equipment and use in of utilities to the site" (i.e., preparing the gaining site for receipt of the equipment). Is this a correct understanding of the costs?

2. RE: Data Call 035A; page 3-4. Is the \$380 K for maintenance and repair, fire protection, etc really a cost paid out every year after 1997 or is it a one-time cost paid in 1997 to prepare the building closed previously by DRAC-91? If it is a recurring cost, why is it an annual cost, and why such an expensive one? I need this information by 1900, 7 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). PAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

Name RE. MEYER

Code 01

Commercial Phone # 301-227-1628

Date 7 Dec 94

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 019

Received: 1907 Hrs; 7 Dec 94

Due: 1900 HRS; 7 Dec 94

1. "RE: Data Call 35A; page 3-3. The note mentions losing and gaining site estimates. If I understand it correctly the costs on p.2-35 are the losing site estimates for the movement and reconstruction of the equipment. The \$380K on p.3-3 is the gaining site estimate for 'clean out of the site, removal of existing equipment and tie in of utilities to the site.' (i.e. preparing the gaining site for receipt of the equipment.) Is this a correct understanding of the costs?"

Response:

Yes, that is the correct understanding of the costs.

2. The below questions and responses apply "RE:Data Call 035A; page 3-4:

- a. "Is the \$380K for maintenance and repair, fire protection, etc really a cost paid out every year after 1997? or is it a one-time cost paid in 1997 to prepare the building closed previously by BRAC-91?"

Response:

The \$380K is the actual annual operating cost of a building closed in BRAC 91 that has the sufficient high bay to install the Machinery Acoustic Silencing Laboratory. That building was selected because of its size and location away from the noise generators, as required by the losing activity.

- b. "If it is a recurring cost, why is it an annual cost, and why such an expensive one?"

Response:

It, however, also contains office space over the high bay area that would not be required for the transfer. No consideration for use or lay-up of this space (i.e. office space over the high bay area) was made in the original submittal. If this space were laid up, the annual cost could be reduced by approximately \$190K. Therefore the overall operating annual cost would be approximately \$190K.

BSAT REQUEST FOR CLARIFICATION -- DJD 020

ATTACHMENT II

REQUEST FOR CLARIFICATION DASH STRUCTURE ANALYSIS TEAM (BSAT)

Control # DJD 020

Date sent: 7 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035A:

1. RE: Data Call 035A, p.2-42, Table 2.K. (line a.) One-Time Unique Costs: The 1996 figure of \$11,470 K does not add up from the costs itemized on p.2-33. I believe the 1996 one-time costs should add to \$11,215 K. The extra \$255 K may be the monthball costs which are identified elsewhere. Please resolve the discrepancy.

I need this information by 1200, 8 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: Please see attached sheet

Mr. Morley

Name

01

Code

301-227-1628

Commercial Phone #

12/8/94

Date

SCENARIO 3-20-0198-35 AND SCENARIO 3-20-0198-35A

Reference: Control #DJD 020

Received: 0836 Hrs; 8 Dec 94

Due: 1200 HRS; 8 Dec 94

1. "RE: Data Call 35A; page 2-42, Table 2-F, (line a) One-Time Costs: The 1996 figure of \$11,470K does not add up from the costs itemized on p.2-33. I believe the 1996 costs should add up to \$11,215K. The extra \$255 K may be due to the mothball costs which are identified elsewhere. Please resolve this discrepancy."

Response:

Yes, you are correct. We have attached the corrected p.2-42 per the reduction of 1996 "One-Time Unique Costs" by \$255K. As this cost was placed in the earlier as a "Recurring Cost" (line f, Table 2-F), no change is required on that entry.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL
Enclosure (2) - LOSING BASE QUESTIONS

Summarize data shown in response to supporting data questions a. through j. above in the following table. Note that all entries must be shown in (\$000).

Table 2-F(1) Dynamic Base Information Summary

Losing Base: NSWC-Annapolis								
		1996	1997	1998	1999	2000	2001	Total
a.	One-Time Unique Costs	11,470 11/2/5	4,700	1,000	8,919	0	0	25,834
b.	One-Time Unique Svgs	0	0	0	0	0	0	0
c.	One-Time Move Costs	6,000	19,650	5,000	0	0	0	30,650
d.	Net Mission Costs	0	0	0	0	0	0	0
e.	Net Mission Savings	0	0	0	0	0	0	0
f.	Misc Recur Costs ²	255 ¹	0	0	0	0	0	255
g.	Misc Recur Savings	0	0	0	0	0	0	0
h.	Land Sales	0	0	0	0	0	0	0
i.	Procurement Cost Avoid	0	0	0	0	0	0	0
j. Fac. Shutdown (KSF)		598						

Note 1: Miscellaneous Recurring Costs provide for the Deep Ocean Facility moth ball costs.

Note 2: Miscellaneous recurring costs are entered for the first year of occurrence per COBRA instructions

Annapolis Site
Scenario 3-20-0198-035A

UIC 61533
6 Dec 1994

2-1342R
12/6/94

Enclosure (2)

BSAT REQUEST FOR CLARIFICATION -- DJD 021

ATTACHMENT II

REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DJD 021

Date sent: 8 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. In the non-CFC R&D program, how many of Annapolis' in-house personnel are performing direct development work on the Navy's non-CFC cooling requirements? Do not include contractors.
2. In the non-CFC R&D program, how many of Annapolis' in-house personnel have duties in program management; awarding, directing and monitoring development contracts; generating performance or cost assessments; or recommending design improvements or corrective actions. Do not include contractors.

I need this information by 1800, 8 December.

 Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: _____

R E METREY

Name

01

Code

301 227 1628

Commercial Phone #

8 DEC 94

Date

Scenario 3-20-0198-035 & -035A

Reference: Control # DJD 021

Received 1630 HRS 8 DEC 1994

Due: 1800 HRS 8 DEC 1994

1. In the non-CFC R&D program, how many of Annapolis' in-house personnel are performing direct development work on the Navy's non-CFC cooling requirements? Do not include contractors.

Response:

At the present time a total of 30 Annapolis in-house personnel are working on the non-CFC R&D program. Due to the critical nature of and magnitude of this effort, it is required to raise this total to 40 by FY 1996 and continue this level of manning for the foreseeable future in order to meet the accelerated CFC phase out schedule. This growth will be accomplished through adjustment of personnel assignments and/or if possible, staff augmentation. Members of the in-house staff frequently split their work time between actual development work and work related to contracting c: program management. Annapolis in-house personnel will perform 25 work years of direct development work on the Navy's non-CFC cooling requirements in FY95 and 33 work years in FY96 and beyond. In addition, an estimated one man year per year of base operating support (which assures the availability of cooling water and other services) is required.

2. In the non-CFC R&D program, how many of Annapolis' in-house personnel have duties in program management, directing and monitoring development contracts, generating performance or cost assessments, or recommending design improvements or corrective actions. Do not include contractors.

Response:

Annapolis in-house personnel will perform 5 work years in the areas of program management, awarding, directing, and monitoring development contracts; generating performance or cost assessments; or recommending design improvements or corrective actions in FY95. In FY96 and beyond this number will grow to 7 work years. Only 3 to 4 personnel are devoted exclusively to these areas, the balance of the work years are split among many personnel attached to this program who use their "hands on" R&D knowledge to ensure that these functions are performed efficiently and to the exacting standards necessary to meet Navy requirements. In addition, an estimated one man year per year of contract specialist support is required.

BSAT REQUEST FOR CLARIFICATION -- DJD 022

ATTACHMENT II

REQUEST 1 CLARIFICATION

BASE STRUCTURE ANALYSIS TEAM (BSAT)

Control # DID 022

Date sent: 8 Dec 94

Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035A:

RE: Previous fax response to RFC DID 011 on 7 Dec 94.

1. The 172 personnel who are proposed to be moved to Philadelphia by the alternative scenario are personnel performing "inherently governmental functions," and the response further defines those functions. Describe how the functions of the 89 personnel who are related to the 6 critical facilities, differ from those captured for the 172.

2. Further, explain the rationale for why these personnel were not proposed to move under the baseline scenario.

I need this information by 1800, 9 December.

Don DeVoe (703) 681-3478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

RE METREY

Code 01

Commercial Phone # 301-227-1628

Date 8 DEC 94

BSAT REQUEST FOR CLARIFICATION CONTROL # DJD 022
SCENARIOS DEVELOPMENT DATA CALLS # 3-20-0198-35A

Ref: Response to DJD 011

1. **QUESTION:** The 172 personnel who are proposed to be moved to Philadelphia by the alternative scenario are personnel performing "inherently governmental functions," and the response further defines those functions. Describe how the functions of the 89 personnel, who are related to the 6 critical facilities differ from those explained for the 172.

Response: For clarity in answer the Question #1 of DJD 011, only the functions of the 172 persons performing inherently governmental functions were addressed. Also in the response to DJD 011, the distribution of personnel to be relocated among technical capabilities and functions was described in a table. That table is reproduced here for your convenience.

Technical Capability	Total Personnel Relocating	Personnel Performing Inherently Governmental Functions	Personnel Related to the 6 Critical Facilities to be Relocated to Philadelphia
Advanced Propulsion Machinery R&D	25	16	9
Advanced Auxiliary Machinery (including Pulsed Power) R&D	101	76	25
Advanced Electric Machinery R&D	82	59	23
Machinery Acoustic Silencing R&D	53	21	32
Sea Survival/Life-Saving Systems	0	0	0
Totals	261	172	89

Personnel Performing Inherently Governmental Functions include positions, such as program management, awarding, directing and monitoring development contracts, generating performance or cost assessments, or recommending design improvements or corrective actions which can be performed without requiring the operation of the facilities now located at Annapolis.

Personnel Related to the 6 Critical Facilities include positions, such as measuring the acoustic performance or thermal efficiency of experimental shipboard machinery, or validating the performance of prototype equipment against specifications, all of which require the Annapolis R&D facilities recommended for relocation to Philadelphia as well as additional inherently governmental functions more closely allied to the

facilities. The 6 facilities were considered to be critical because the existing facilities at Philadelphia are not capable of performing the R&D functions relocating.

2. **QUESTION: Further, explain the rationale for why these personnel were not proposed to move under the baseline scenario.**

Response: The additional 89 personnel related to the 6 facilities are relocated to preserve the capability to measure/evaluate performance of developmental machinery systems and components. These personnel were not relocated under Scenario -35 because they were closely related to the facilities and can not perform their functions without those facilities.

The movement of the 89 personnel and 6 critical facilities was not proposed in the Baseline Scenario -035, because our interpretation of the scenario statement was that facilities could not be relocated or duplicated under the scenario's guidelines.

Under the alternative Scenario -35A, positions associated with the facilities to be relocated provide complementary assets in the performance of the inherently governmental functions within Scenario -35. Without these personnel and facilities, the ability of the Navy to perform those inherently governmental functions described in the Baseline Scenario -35 will decrease in effectiveness in the future.

BSAT REQUEST FOR CLARIFICATION -- DJD 023

ATTACHMENT II

**REQUEST FOR CLARIFICATION
DASH STRUCTURE ANALYSIS TEAM (DSAT)**

Date sent: 9 Dec 94

Control # DSD 023
Activity: NSWC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. I understand that the non-CRC R&D program is scheduled to end in 2002. Identify the technical milestones that the program is working toward, as well as policy directives and potential requirements that are driving them. For each year of the R&D program through 2002, show the technical staffing levels for contractor personnel.

2. Is all of the program's technical activity confined to Buildings 3B/3C/3E?

3. I understand that the total replacement value for the facilities is approximately \$1.2 B. Assuming available funds, how long would it take to replicate (not relocate) these facilities at NSWC-Philadelphia, with concurrent operation of the present facilities?

4. Where did the major equipment/facilities of the non-CRC complex come from?
I need this information by 1700, 9 December.

Don De Young (703) 681-0476

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the NSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

Name

R. C. METRE

Code

01

Commercial Phone #

Date

10/9/94

Scenario 3-20-0198-035 & -035A

Reference: Control # DJD 023

Received 1300 HRS 9 DEC 1994

Due: 1700 HRS 9 DEC 1994

1. I understand that the non-CFC R&D program is scheduled to end in 2002. Identify the technical milestones that the program is working toward, as well as policy directives and political requirements that are driving them. For each year of the R&D program through 2002, show the technical staffing levels for contractor personnel.

Response: The non-CFC R&D program is scheduled to end in 2002 as shown in attachment 1.

The R&D program is followed by fleet implementation which continues through 2010. It is essential that R&D facilities remain operational through the period of fleet implementation to solve potential problems which occur during implementation. Attachment 2 shows details of the R&D program as it relates to specific ship classes.

The Department of Defense Directive (No. 6050.9), attachment 3, establishes policy and assigns responsibilities for Research and Development programs to develop suitable substitutes for CFC applications. Attachment 4 (OPNAVINST 5090.2) establishes policy for implementing the Department of Defense Directive within the Navy. The Naval Sea Systems Command letter of 27 July 1990 (attachment 5) assigns execution of the CFC R&D program to NSWC-CD. The staffing levels for contractors are shown in the following table and are our best estimates, assuming planned schedules can be met.

Staffing Level for Contractor Personnel By Fiscal Year and Site

LOCATION	Fiscal year							
	95	96	97	98	99	00	01	02
Annapolis on Site	2	2	2	2	2	2	2	2
York	40	42	44	40	30	20	10	0
Northern Research and Engineering	3	4	4	3	3	2	0	0

Note: This contractor effort does not include any support for technical manuals, etc. which are not included in the R&D program.

2. Is all of the program's technical activity confined to Buildings 3B/3C/3E?

Response: Yes, except for some of the technical personnel office space located in Building 3D which is adjacent to the others.

3. I understand that the total replacement value for the facilities is approximately \$11.2M. Assuming available funds, how long would it take to

replicate (not relocate) those facilities at NSWC-Philadelphia, with concurrent operation of the present facilities?

Response: The replacement cost of \$11.2M is correct, excluding class two (buildings) and the air conditioning plants themselves. The savings gained from not disassembling existing facilities and shipping them to Philadelphia is equivalent to the cost of purchasing new materials for use in Philadelphia. Assuming available funds in addition to qualified engineers and technicians, it would take approximately 18 months to replicate the facilities. This schedule could possibly be accelerated slightly by the use of extensive overtime with the associated increases in costs above \$11.2M. For the facilities to be productive, and to avoid program delays, additional air conditioning plants would need to be purchased at a cost of approximately \$9M with three year contract and delivery time. Following this, approximately 9 months of baseline operation to map the performance of the plant in its facility would be required before the R&D program could continue. Additional personnel would be required to be trained during this period to allow the Annapolis personnel to continue working; however, one would expect some delay in schedule due to an obvious requirement for the Annapolis personnel to be involved in the relocation activities. As an example, construction of the current facility began in 1991 and will be fully operational in 1995.

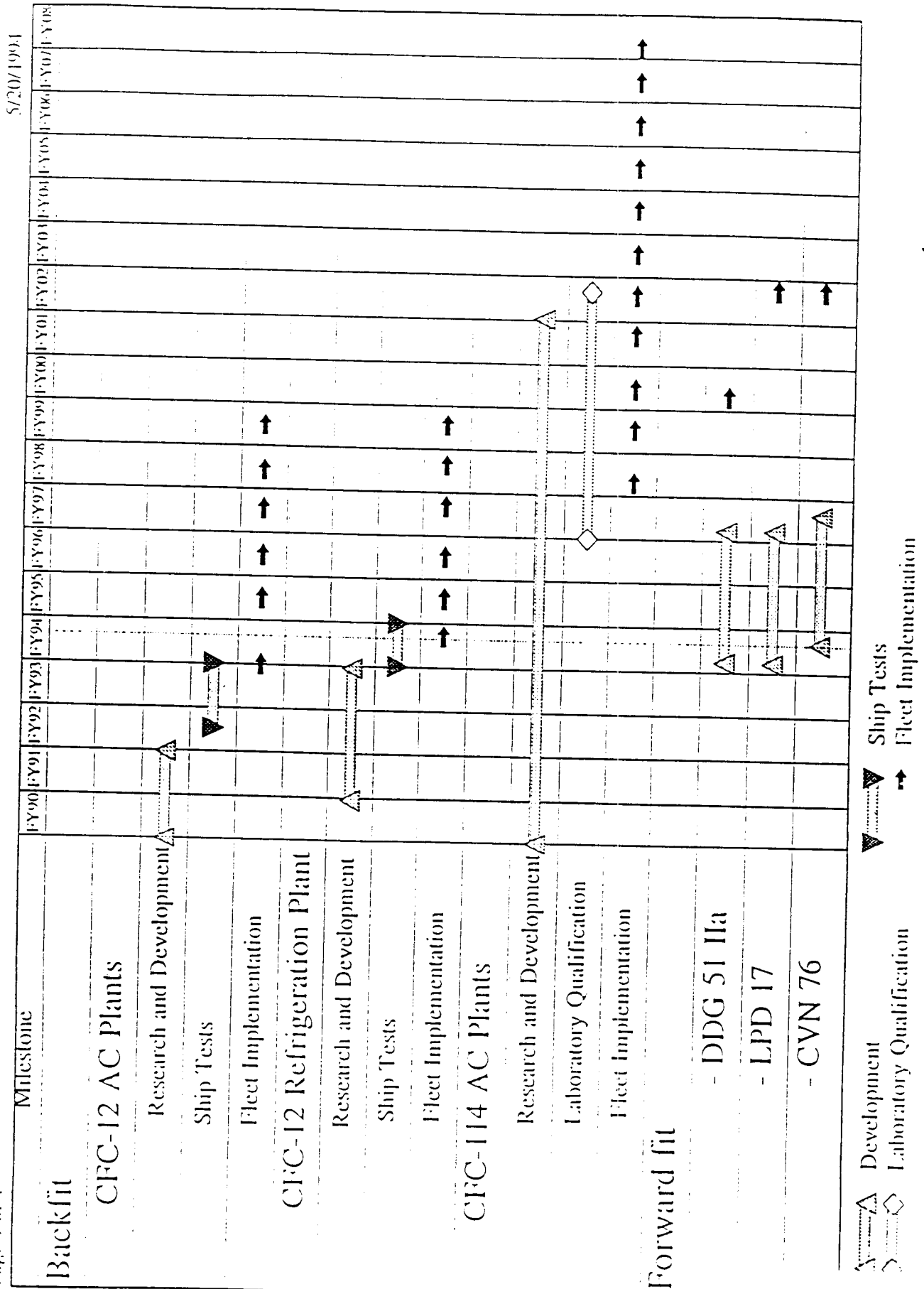
4. Where did the major equipment/facilities of the non-CFC complex come from?

Response: The CFC Facilities were designed by NSWC Annapolis. They are constructed from commercially available materials, with the exception of the air conditioning plants themselves, which were purchased from York International. Construction of the facilities was done on site by NSWC personnel.

CFC Elimination Program - Refrigerants Project

Big Picture Milestones

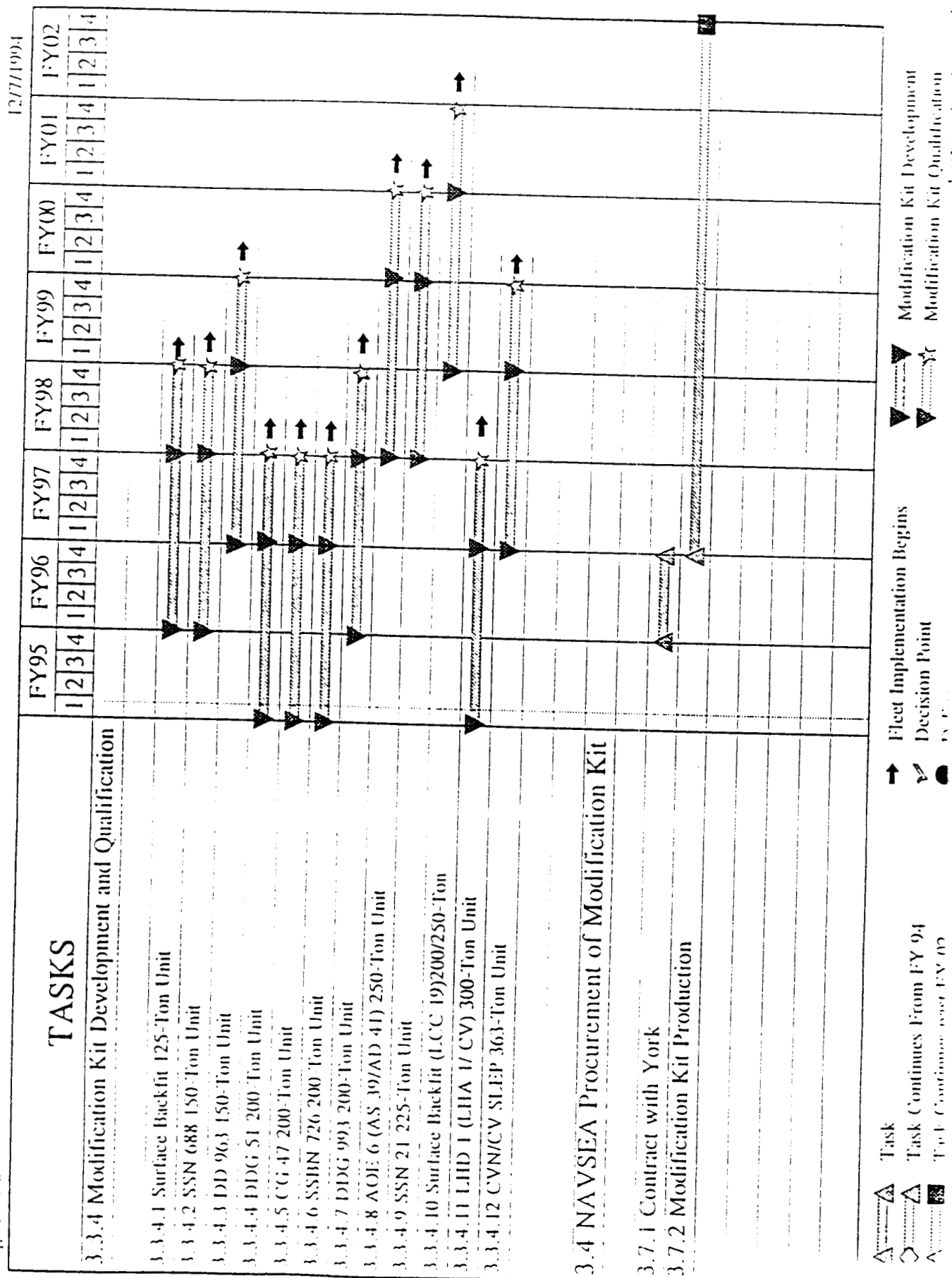
Page 1 of 1



(114)

CFC_A Elimination Program - Refrigerants

Page 5 of 8





Department of Defense DIRECTIVE

February 13, 1989
NUMBER 6050.9

USD(A)

SUBJECT: Chlorofluorocarbons (CFCs) and Halons

References: (a) Montreal Protocol on Substances that Deplete the Ozone Layer¹
(b) Protection of Stratospheric Ozone: U.S. Environmental Protection Agency (USEPA) Final Rule (Federal Register, Volume 53, page 30566, August 12, 1988)

A. PURPOSE

This Directive establishes policy and assigns responsibilities for:

1. The management of CFCs and halons in the Department of Defense.
2. The identification of CFC and halon applications and prioritization of their uses.
3. The long-term process of decreasing DoD dependence on CFCs and halons because of reduced availability in future years due to recently promulgated international and domestic production limits (references (a) and (b)).
4. Research and development (R&D) programs to develop or evaluate suitable substitutes for halons and other mission-critical CFC applications.
5. A tracking system to document DoD's annual requirements for CFCs and halons.

B. APPLICABILITY AND SCOPE

This Directive applies to:

1. The Office of the Secretary of Defense (OSD), the Military Departments (including their National Guard and Reserve components), the Defense Agencies, and the DoD Field Activities (hereafter referred to collectively as "DoD Components").
2. The DoD R&D and Acquisition Program.
3. Appropriated and nonappropriated fund operations.

¹Text is available from the U.S. Department of State. This protocol has been accepted by the United States and entered into force on 1 January 1989.

C. DEFINITION

Chlorofluorocarbons and Halons. As of August 1988, these include CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, Halon 1211, Halon 1301, and Halon 2402. The protocol (reference (a)) is subject to periodic review, and additional chemicals may be added to the list.

D. POLICY

The DoD Components shall:

1. Establish procedures to eliminate the unnecessary release of these chemicals to the atmosphere.
2. Identify and prioritize CFC and halon uses and applications to ensure available supplies meet mission-critical needs.
3. Modify operational, training, and testing practices to minimize the emissions of CFCs and halons when appropriate.
4. Develop or adopt conservation practices such as recycling, reuse, dilution and substitution, when appropriate and consistent with mission requirements.
5. Adopt suitable substitutes when consistent with mission requirements.
6. Review and modify military specifications to permit use of new processes, techniques, or chemicals for requirements currently being met by CFCs and halons.
7. Conduct R&D to identify or develop alternate processes, chemicals, or techniques for functions currently being met by CFCs and halons.
8. Collect procurement data on an annual basis.
9. Establish a central point of contact to oversee implementation of all policies and programs required by this Directive.
10. Ensure the required amounts and types of CFCs and/or halons are available for mission-critical applications when substitutes are not yet available. This shall include emergency and mobilization requirements.

E. RESPONSIBILITIES

1. The Assistant Secretary of Defense (Production and Logistics) (ASD(P&L)) shall provide policy and management oversight for reducing DoD's long-term dependence on CFCs and halons including issues related to military specifications and annual procurement and demand.
2. The Deputy Under Secretary of Defense (Research & Advanced Technology) (DUSD(R&AT)) shall coordinate R&D programs, as appropriate, on alternative chemicals or technologies for fire and explosion suppression and, if necessary, other CFCs.

CHLOROFLUOROCARBONS (CFCs) AND HALONS ANNUAL REPORT

FOR CALENDAR YEAR _____

RPOA MOL SYMBOL

1. PROCUREMENT* (in thousands of pounds)				2. DEMAND** (in thousands of pounds)				
CHEMICAL	(1) Sum of Integrated Materiel Manager Reporting	(2) Total Purchase by Component	(3) New System Acquisition	(1) Army	(2) Navy	(3) Air Force	(4) Marines	(5) Other (Specify)
a. CFC-11								
b. CFC-12								
c. CFC-113								
d. CFC-114								
e. CFC-115								
f. HALON 1211								
g. HALON 1301								
h. HALON 2402								

3. REMARKS

NOTES:

- * PROCUREMENT - Material purchased by component.
- ** DEMAND - Material requisitioned from procuring component to user or other military component.

DD Form 2530, NOV 88

5077 31

DEPARTMENT OF THE NAVY
Office of the Chief of Naval Operations
Washington, DC 20350-2000

OPNAVINST 5090.2
OP-45
22 January 1990

OPNAV INSTRUCTION 5090.2

From: ~~Chief~~ Of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: MANAGEMENT OF OZONE
DEPLETING SUBSTANCES

- Ref: (a) SECNAVINST 5090.5 (NOTAL)
(b) Montreal Protocol on Substances that Deplete the Ozone Layer (NOTAL)
(c) Environmental Protection Agency, Stratospheric Ozone Protection Regulation, 40 CFR 82 (NOTAL)
(d) OPNAVINST 4110.2 (NOTAL)
(e) OPNAVINST 5100.19B (NOTAL)
(f) OPNAVINST 5090.1 (NOTAL)
(g) Submarine Atmosphere Control Manual, S9510-AB-ATM-010/U (NOTAL)

1. Purpose. To implement reference (a) within the Navy and establish policies and assign responsibilities for management of ozone depleting substances.

2. Background

a. Chlorofluorocarbons (CFCs) and halons have been linked to the depletion of the Earth's ozone layer which protects life from damaging ultraviolet light. In response to the threat ozone depleting substances present to the environment, 39 nations, including the United States (U.S.), signed the Montreal Protocol (reference (b)). Reference (c) is the regulation issued by the Environmental Protection Agency (EPA) implementing the Montreal Protocol. Reference (b) has been in force in the U.S. since 1 January 1989 and currently provides for the following:

(1) Freezing CFC production at 1986 levels by 1989.

(2) 20 percent reduction, from 1986 levels, in CFC production by 1993.

(3) A further 30 percent reduction in CFC production by 1993.

(4) Freezing halon production at 1986 levels by 1992.

b. In March 1989, the 12 European Community countries voted to eliminate all CFC production by the end of the century. Increasing national and international concerns and pressures may result in further significant reductions in production and perhaps total elimination of ozone depleting substances within the next 10 to 15 years.

3. Applicability. This instruction applies to all Navy ships, shore activities and Government-Owned/Contractor-Operated (GO/CO) facilities world-wide.

4. Definitions

a. Ozone Depleting Substances. As of the issuance of this instruction, chemicals subject to reference (b) include CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, (also referred to as Freons 11, 12, 113, 114 and 115) Halon 1211, Halon 1301 and Halon 2402 (also referred to as R-1211, 1301 and 2402). Reference (b) is subject to review in April 1990 and periodically thereafter. As a result of these reviews, additional chemicals may be added to this list. The EPA has already proposed that carbon tetrachloride and methyl chloroform be added to the list of chemicals regulated under reference (b).

b. Acquisition. Any act of obtaining ozone depleting substances, including those obtained as a component of a piece of equipment. This includes acquisitions by an activity from Naval Supply Systems Command, NAVSUPSYSCOM, General Services Administration, activity supply department or any other organization.

APPROVAL TO 56- 5044
07E, 09B38, 09B11

0579-LD-054-5670

5. ~~Discussions.~~ To ensure that adequate quantities of ~~ozone depleting~~ substances like CFCs and halon ~~are~~ available for mission essential operations (e.g. fire protection), the Navy must determine where these substances are used and in what quantities. Equally important is the ability to demonstrate those actions the Navy is undertaking to reduce the use and emission of ozone depleting substances. This is particularly important if a one-for-one substitute for halon and certain critical CFCs is not developed within the near future and legislation is proposed which totally phases out production of those substances. In the event that such legislation is proposed, the Navy must be in a position to demonstrate that its use of ozone depleting substances is restricted, and that deliberate emissions of ozone depleting substances with the exception of halon, will not occur and that halon emissions will only occur to fight a fire. To satisfy these objectives, annual acquisition reporting, emissions reporting and a zero discharge policy for disposal of ozone depleting substances are provided for in this instruction.

6. Policy

a. Emissions of ozone depleting substances by direct release to the atmosphere are prohibited as of 1 January 1993 or within 24 months after the issuance of procurement specifications for CFC and halon recycling units by the Naval Sea Systems Command (NAVSEASYSKOM), whichever is earlier.

b. Emissions of ozone depleting substance afloat or ashore after 1 January 1993 shall be reported to Chief of Naval Operations (CNO (OP-45)) under procedures and criteria to be developed by NAVSEASYSKOM.

c. Ozone depleting substances, in general, are hazardous material (HMI) and are subject to the requirements of this instruction as well as references d and e.

d. Non-essential and non-military unique uses of ozone depleting substances shall be phased out as soon as possible at all levels.

e. Conservation practices such as recycling of ozone depleting substances shall be used to the maximum extent possible.

f. Operational, training and testing practices shall be modified to reduce emissions of ozone depleting substances to the maximum extent possible and eventually eliminate their use completely.

g. Usage of ozone depleting substances shall be surveyed, emissions inventoried and usages prioritized to identify mission essential operations and volumes required for those essential operations.

h. Acquisition of ozone depleting substances shall be carefully controlled and regulated to ensure that accurate usage and inventory data can be annually prepared.

i. Surveys on the amounts of ozone depleting substances acquired each calendar year shall be collected annually beginning in calendar year 1991 by NAVSUPSYSCOM for all shore activities and GO/CO facilities. These surveys are required by reference (a). Individual ship reporting shall not be required since they will be included in the Navy Supply Center acquisition reports.

(1) Annual reporting of ozone depleting substance purchases is required from each Navy shore activity and GO/CO regardless of size. Every specific shore activity that acquires ozone depleting substances must report separately.

(2) Reporting on ozone depleting substances acquisition shall be done as part of a Navywide Hazardous Material Control and Tracking System to be developed by NAVSUPSYSCOM. OPNAV 5090-3 applies.)

j. ~~Naval activities~~ activities shall each report their emissions of CFCs and halons under the criteria to be established by NAVSEASYSKOM. Non-Navy ~~tenants~~ located on Navy activities are not required to report their emissions of CFCs and halons to the Navy.

k. Navy tenant activities located on non-Navy host facilities shall submit their annual acquisitions of CFCs and halons as specified in paragraph 6i.

7. Responsibilities and Actions

a. OPNAV Principal Officials. Within the Office of the Chief of Naval Operations (OPNAV), the following actions and responsibilities are assigned:

(1) Deputy Chief of Naval Operations (Logistics) will:

(a) Annually review in conjunction with the Assistant Chiefs of Naval Operations and Director of Research and Development Requirements, Test and Evaluation the adequacy of ozone depleting substances programs and resources.

(b) Review and prioritize usage of ozone depleting substances at shore facilities in order to establish quantity requirements for inventory management of ozone depleting substances and to ensure required amounts are available for mission essential applications at shore facilities.

(c) Submit an annual acquisition report on ozone depleting substances to the Assistant Secretary of the Navy (Shipbuilding and Logistics) for submittal to the Deputy Assistant Secretary of Defense (Environment) as required by reference (a).

(d) Assistant Chiefs of Naval Operations will review and prioritize usage of ozone depleting substances aboard submarines, ships and aircraft to establish quantities required for

inventory management of ozone depleting substances and to ensure required amounts are available for mission essential applications.

(3) Director of Research and Development Requirements, Test and Evaluation will annually review the adequacy of programmed funds and schedules, including test and evaluation, to achieve the Research and Development (R&D) policies established in this instruction and reference (a).

b. Echelon II Commands.

(1) All Echelon II Commands will:

(a) Implement the policies and procedures of this instruction and ensure that annual reporting requirements of this instruction are correctly followed by their activities.

(b) Identify in their Program Objectives Memorandum (POM) process funding for elimination, recycling and substitution of ozone depleting substances. Information to be included:

((1)) Estimates of resource requirements.

((2)) Assignment of responsibilities within their respective organization.

((3)) Description of specific projects for elimination, recycling or substitution of ozone depleting substances with estimates on reduction in usage or emissions, cost and completion date.

(c) Beginning with fiscal year 1990, annually report to NAVSEASYSKOM (SEA 56) by 1 January (first report due 1 January 1991) on their accomplishments from the previously completed fiscal year, related to the elimination, recycling and substitution of ozone depleting substances. Information to be included in the report:

(1) Description of specific work completed, underway and volume of each type of ozone depleting substances eliminated, recycled or substituted.

(2) Amount and types of funds expended on each project.

(3) List of specifications and preventive maintenance procedures which were revised, eliminating the requirement for use of ozone depleting substances.

(4) List of specifications and preventive maintenance procedures which still require use of ozone depleting substances and plans of actions and milestones for their revision, eliminating use of those substances.

(d) Revise preventative and corrective maintenance procedures to incorporate use of CFC and halon recycling units within 24 months of the issuance of a procurement specification for those units by NAVSEASYSKOM.

(e) Establish a command coordinator to exercise overall direction of their elimination/minimization programs for ozone depleting substances and inform CNO (OP-45) and NAVSEASYSKOM (SEA-56) of same within 90 days of the date of this instruction.

(f) Expedite implementation of non-ozone depleting substitutes, ozone depleting substance recycling methods and use of substitute test gases and training foams.

(g) Participate in national ozone depleting substance (R&D) consortiums to ensure that the Navy's interests are identified and to determine what organizations shall conduct R&D to address their unique operations which use ozone depleting substances.

2) Commander, NAVSEASYSKOM will:

a) Serve as the lead echelon II command and coordinate the ozone depleting

substances programs of the other echelon II commands.

(b) In conjunction with NAVAIR-SYSCOM and other interested echelon II commands, develop procurement specifications for commercially available individual and combination CFC and halon recycling units by 1 July 1990.

(c) Submit annually, by 1 April of each year, a report to CNO (OP-45) on the progress made by all echelon II commands on elimination, recycling and substitution of ozone depleting substances. Also include a Navy plan for further actions after surveying the echelon II requirements.

(d) Prepare, in conjunction with NAVSUPSYSCOM, forms to be used in the Navy-wide Hazardous Material Control and Tracking System for reporting annual calendar year acquisition of ozone depleting substances (DD-P&L(A)1504 (5090 applies).)

(e) Prepare procedures and criteria for reporting emissions of ozone depleting substances. This reporting shall be similar to oil spill reporting already required by reference (f). Reporting to begin by 1 January 1993 unless superseded by EPA regulations. Reporting procedures to be revised as necessary to comply with EPA regulations.

(3) Commander, NAVAIRSYSCOM will:

(a) Perform Navywide survey of ozone depleting substances usage, emissions and acquisitions for calendar years 1989 and 1990 in coordination with NAVSEASYSKOM. Survey to include submarines, ships, aircraft, GO/CO and shore facilities and shall address current and proposed ozone depleting substances as identified by EPA at the time of the survey.

(b) Assist NAVSEASYSKOM in the development of a procurement specification for a halon recovery unit.

(c) Utilizing the Department of Defense Automated Specifications and Standards Information System (ASSIST), perform Navy-wide specification review and identify those specifications requiring use of ozone depleting substances. Identify Navy specifications which require use of an ozone depleting substance and provide a report to NAVSEASYSKOM and each appropriate echelon II command. Update the ASSIST database as directed by NAVSEASYSKOM when specifications incorporate environmentally and mission acceptable substitutes.

(4) Commander, NAVSUPSYSCOM will:

(a) In conjunction with NAVSEASYSKOM and consistent with reference (d), revise acquisition instructions and guidance, starting with calendar year 1991, for reporting on the acquisition of all current and proposed ozone depleting substances throughout the Navy. These revisions shall be extensive enough to eliminate the reporting of ozone depleting substances purchases by commands afloat.

(b) Revise, as necessary, acquisition instructions and guidance to include additional ozone depleting substances as they are regulated by the Environmental Protection Agency.

(c) Provide NAVSEASYSKOM the annual data on ozone depleting substances by 1 March of each year.

(d) Develop a system for inventory management of mission essential quantities of ozone depleting substances by 1 January 1993. Inventory management to be based on the quantities established by the Assistant and Deputy Chiefs of Naval Operations in paragraphs 7a(2) and 7b(3) respectively.

(e) When requested, assist NAVAIRSYSCOM's survey of ozone depleting substances by providing procurement and requisition information. Also provide assistance to other echelon II commands as requested.

(f) Incorporate into the Navy supply system CFC and halon recycling units within 150 days of issuance of a procurement specification by NAVSEASYSKOM.

(5) Commander, Naval Facilities Engineering Command will revise Resident Officer In Charge of Construction (ROICC) guidance to address the reporting of indirect purchases of ozone depleting substances, via construction contracts, to NAVSUPSYSCOM.

(6) Chief, Bureau of Medicine and Surgery will provide workplace hazard evaluations and health risk assessments on substitutes for ozone depleting substances in Navy unique working environments as requested by other echelon II commands.

(7) Chief of Naval Education and Training will:

(a) Develop alternate training procedures using non-ozone depleting substances where consistent with mission requirements.

(b) Incorporate ozone depleting substances issues into the hazardous material control and management training to be developed under reference (d).

c. Commanding Officers

(1) Commanding Officers ashore and afloat will:

(a) Beginning 1 January 1993, report emissions of ozone depleting substances under the procedures to be developed by NAVSEASYSKOM.

(b) Implement appropriate ozone depleting substances procurement and requisition procedures when established by NAVSUPSYSCOM in 1991. Internal purchasing procedures shall also be established consistent with reference (d).

(c) Ozone depleting substances shall be included in the "authorized HM use list" required for decontamination by reference (d) for shore activities and in the "Ships Hazardous Material List" under references (e) and (g) for forces afloat.

(d) Establish procedures to eliminate emissions of ozone depleting substances to the atmosphere and modify operations, training and testing practices accordingly.

(e) Adopt conservation practices, such as substitution and recycling of ozone

depleting substances, where possible and consistent with mission requirements.

(2) Commanding Officers ashore will, beginning with calendar year 1991, annually report on the quantities of ozone depleting substances acquired. Report to be done following the instructions to be prepared by NAVSUPSYSCOM. Report to be submitted by 1 February of the following year. (DD-P&L(A) 1804(5090) applies.)

8. Reports. The following reports are approved for three years from the date of this instruction:

<u>Report Symbol</u>	<u>Title</u>	<u>Paragraph</u>
OPNAV 5090-6	Elimination, Recycling and Substitution of Ozone Depleting Substances	7b(1)
OPNAV 5090-7	Progress of Echelon II Commands on Elimination, Recycling and Substitution of Ozone Depleting Substances	7b(2)
OPNAV 5090-8	Report of Emissions of Ozone Depleting Substances	7c(1)

S. R. ARTHUR
Deputy Chief of Naval
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(continues on next page)

LIST OF CLASS I AND CLASS II CHEMICALS

CLASS I CHEMICAL AGENTS

Group I (CFC - chlorofluorocarbon)

ODP

CFC-11	Trichlorofluoromethane	1.0
CFC-12	Dichlorodifluoromethane	1.0
CFC-113	Trichlorotrifluoroethane	1.0
CFC-114	Dichlorotetrafluoroethane	0.8
CFC-115	Chloropentafluoroethane	1.0
CFC-500	Dichlorodifluoromethane-difluoroethane	0.6
CFC-502	Chlorodifluoromethane-chloropentafluoroethane	0.738
		0.307

Group II

Halon-1211	Bromochlorodifluoromethane	3.0
Halon-1301	Bromotrifluoromethane	10.0
Halon-2402	Dibromotetrafluoroethane	6.0

Group III (CFC - chlorofluorocarbon)

CFC-13	Chlorotrifluoromethane	1.0
CFC-111	Pentachlorofluoroethane	1.0
CFC-112	Tetrachlorodifluoroethane	1.0
CFC-211	Heptachlorofluoropropane	1.0
CFC-212	Hexachlorodifluoropropane	1.0
CFC-213	Pentachlorotrifluoropropane	1.0
CFC-214	Tetrachlorotetrafluoropropane	1.0
CFC-215	Trichloropentafluoropropane	1.0
CFC-216	Dichlorohexafluoropropane	1.0
CFC-217	Chloroheptafluoropropane	1.0
CFC-503	Chlorotrifluoromethane-trifluoromethane	0.599

Group IV

Carbon Tetrachloride	Tetrachloromethane	1.1
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Group V

Methyl Chloroform	Trichloroethane all isomers	0.1
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Enclosure (1)

OPNAVINST 5090.2
22 January 1990

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DEPARTMENT OF THE NAVY
Office of the Chief of Naval Operations
Washington DC 20350-2000

OPNAVINST 5090.2A
N45
14 July 1994

OPNAV INSTRUCTION 5090.2A

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps
field addressees not having Navy personnel
attached)

Subj: MANAGEMENT OF OZONE
DEPLETING SUBSTANCES

- Ref: (a) DOD Directive 6050.9 of 13 Feb 89
(NOTAL)
(b) SECNAVINST 5090.5 of 20 Nov 89
(NOTAL)
(c) Clean Air Act, as amended, 42 United
States Code (U.S.C.) § 7401-§ 7671g
(d) Department of Defense (DOD)
Authorization Act of 1993, Public Law
(P.L.) 102-484, § 326
(e) 40 Code of Federal Regulations (CFR)
Part 82, Protection of Stratospheric
Ozone
(f) OPNAVINST 4110.2 (NOTAL)

- Encl: (1) List of Class I and Class II Chemicals
(2) Ozone Depleting Substances Annual
Report

1. Purpose

a. To implement references (a) and (b), and incorporate necessary changes to the U.S. Navy Chlorofluorocarbon (CFC) and Halon Program under the enactment of the Clean Air Act Amendments of 1990 (reference (c)), the accelerated production phase-out schedule for Class I Ozone Depleting Substances (ODSs) announced by the President, and reference (d).

b. To detail the specific restrictions and uses of ODSs within Navy.

This instruction has been substantially revised and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 5090.1 and OPNAV 5090-6.

3. Background

a. CFCs, halons and other chlorinated hydrocarbons (carbon tetrachloride, methyl chloroform, hydrochlorofluorocarbons (HCFCs), etc.) have been linked to the depletion of the earth's ozone layer which protects life and vegetation from damaging ultraviolet light. In response to the threat ODSs present to the environment, more than 70 nations, including the United States, signed an international agreement known as the Montreal Protocol limiting ODS production. In 1990, due to increasing evidence of continued harm to the ozone layer, the Protocol was amended to provide for the eventual elimination of most ODSs. In November 1990, the United States Congress passed implementing national legislation as part of the 1990 Clean Air Act Amendments (reference (c)).

b. Based on National Aeronautics and Space Administration (NASA) findings of increased stratospheric ozone layer depletion, President Bush announced, on 11 February 1992, the United States will unilaterally accelerate the production phase-out of all Class I ODSs to 31 December 1995.

c. In November 1992, in a meeting in Copenhagen, parties to the Montreal Protocol agreed to accelerate the production phase-out schedules of CFCs to 1 January 1996 and halons to 1 January 1994.

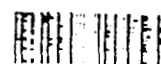
d. In summary, all of the above actions provide for the following:

(1) Production reductions for CFCs, halons, carbon tetrachloride and methyl chloroform (also known as 1,1,1 trichloroethane) with total production elimination by 1996.

(2) Mandatory use of approved recovery and recycling equipment by a certified technician when repairing or servicing motor vehicle air conditioners.

(3) Mandatory use of approved recovery and recycling equipment by a certified technician when repairing, servicing, maintaining or disposing of appliances and industrial process refrigeration and air conditioning.

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(4) The prohibition of the knowing release of any Class I or Class II ODS refrigerant during service, repair or disposal of appliances and industrial process refrigeration and air conditioning.

(5) Reduction of the use and emission of ODSs to the lowest achievable level.

4. Applicability. This instruction applies to all Navy ships, squadrons, shore activities (including non-appropriated fund activities) and Government Owned, Contractor-Operated (GO/CO) facilities world-wide except as follows:

a. **Naval Nuclear Propulsion Program.** Executive Order (E.O.) 12344, statutorily prescribed by Public Law (P.L.) 98-525 (42 U.S.C. 7153, note), establishes the responsibilities and authorities of the Director, Naval Nuclear Propulsion Program, NNPP, in the Office of the Chief of Naval Operations (who is also Deputy Commander Nuclear Propulsion Directorate (SEA 03) in the Naval Sea Systems Command) over all facilities and activities which comprise the Program, a joint Department of Energy (DOE)/Navy organization. These responsibilities and authorities include all technical and logistical matters related to naval nuclear propulsion. Nothing in this policy supersedes or changes these responsibilities and authorities which includes ensuring compliance with applicable statutory and regulatory requirements such as those prescribed by reference (c). The provisions of this instruction do not apply to facilities and activities covered under E.O. 12344 and P.L. 98-525.

b. **Medical Devices.** This policy does not apply to essential uses of ODSs for medical devices as defined in P.L. 101-549 § 604(S) and approved for use as specified in P.L. 101-549 § 604(d)(2) and § 605(d)(1) by the Commissioner of the Food and Drug Administration and the Administrator of the Environmental Protection Agency (EPA) for Class I and Class II ODS.

c. **Small Appliances.** Small appliances are appliances that do not normally require routine maintenance of the sealed refrigerant system and contain a refrigerant charge of five pounds or less. Examples are refrigerators, freezers, dehumidifiers, ice makers, vending machines, water coolers, etc. The phase-out of Class I ODSs used in shore-based non-mission critical heating, ventilating, air conditioning and refrigerating (HVAC&R) equipment in paragraph 7a does not apply to small appliances.

5. Definitions

a. **Ozone Depleting Substances (ODSs).** Any chemical which is listed as a Class I or Class II substance as defined in reference (c). A complete listing of ODSs as of the date of this instruction is included in enclosure (b). As of the issuance of this instruction, ODSs most prevalent in Navy applications include: CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, HCFC-22 (CFCs and HCFCs are also commonly referred to as Freons), Halon 1211, Halon 1301, methyl chloroform and carbon tetrachloride.

b. **Acquisition.** Acquisition of ODSs will be in accordance with reference (d), E.O. 12843 of 21 April 1993 and the Secretary of the Navy memorandum of 28 May 1993, "Elimination of Class I Ozone Depleting Substances in Department of the Navy Contracts" (NOTAL), all implementing procurement regulations and reference (b).

c. **Recovery.** The removal of any Class I or Class II ODS in any condition from a system without testing or processing.

d. **Recycling.** The reduction of contaminants in a used ODS by oil separation and single or multiple passes through devices which reduce moisture, acidity and particulate matter.

e. **Reclaiming.** The process of returning a used or contaminated ODS to near original specifications, by means which may include distillation. Chemical analysis of the ODS is required to determine that the appropriate product specifications are met.

f. **Mission Critical Use.** Any use of a substance which has an impact on combat mission capability as determined by the Chief of Naval Operations.

6. Discussion

a. In recent years, Navy has been involved in the research and development of alternative substances and systems, and recovery and recycling equipment that decrease Navy's dependence on ODSs. Due to the large quantities of agents used and the numerous applications of these agents, each situation should be carefully evaluated to determine the proper course of action needed to phase out the usage of such agents in all military applications, such as fire protection and shipboard chilled-water air conditioning and

refrigeration systems, it is essential these agents be recycled, conserved and properly managed to ensure adequate availability of agent until such time as a suitable alternative can be tested, qualified, and implemented. It is important Navy continue to reduce use of ODS, and where used, to eliminate emissions of ODSs for compliance with the requirements of reference (c).

b. To satisfy these objectives this instruction provides policy on ODS use, recycling, material management, emissions, substitution, and research, development, testing and evaluation (RDT&E). This instruction also provides for annual demand reporting.

7. Policy

a. Navy activities will procure recycled or reclaimed ODSs whenever possible.

b. The use of Class I ODSs will continue for mission critical applications to not jeopardize or degrade the safety or operational requirements of Navy. Navy mission critical applications are as follows:

(1) CFC-12, CFC-11, CFC-500 and CFC-114 used in ship combat systems support equipment and aircraft environmental control systems.

(2) Halon 1211 used in flight line fire protection, ship and shore-based crash fire and rescue vehicles, and limited use for firefighter training.

(3) Halon 1301 used in shipboard room flooding applications and aircraft fire protection.

(4) Essential CFC-113 uses in the manufacturing and maintenance of combat weapon and support systems where no compatible approved substitute exists (e.g., cleaning of gyroscopes and compressed oxygen systems).

(5) Shore-based heating, ventilation, air conditioning, and refrigeration (HVAC&R) equipment and fire protection systems directly supporting weapon delivery systems.

The use of ODSs in mission critical applications will continue until such time as the cognizant Echelon 2 command approves and implements safe alternative substances or systems. Echelon 2 commands will determine ODS reserve requirements for these

applications that will ensure continued operation for the expected service life of the weapon system or equipment.

c. All shore-based (non-mission critical) HVAC&R equipment for which procurement was initiated after the date of this instruction will use an EPA Significant New Alternatives Program (SNAP) approved refrigerant with an ozone depletion potential (ODP) of 0.05 or less. Currently installed shore-based (non-mission critical) HVAC&R equipment containing a Class I ODS will be replaced or converted to an EPA SNAP-approved refrigerant with an ODP of 0.05 or less by 31 December 2000. Serviceable refrigerant from the above replacements or conversions will be recovered, recycled, reclaimed and reused. Refrigerant recovered, recycled, and reclaimed may be stored and used locally in order to service existing Class I ODS HVAC&R equipment to ensure orderly transition to a non-Class I ODS refrigerant. This supply will be managed at the activity level and eventually disposed of, or deposited in Navy ODS reserve in accordance with all applicable regulations. If an activity determines it is economically feasible to maintain some HVAC&R equipment containing a Class I ODS past 31 December 2000, then a waiver in accordance with this instruction is required.

d. Procurement of portable halon fire extinguishers is prohibited except for mission critical uses.

e. Installation of shore-based Halon 1301 fire protection systems is prohibited.

f. All non-mission critical shore-based Halon 1301 systems will be replaced by 31 December 2000. Halon 1301 will be recovered and deposited in the Navy portion of the DOD ODS reserve. Transfer and processing of Halon 1301 will be accomplished as per Defense Logistics Agency (DLA) and Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM) guidance.

g. By not later than 1 January 1996, all non-mission critical halon portable fire extinguishers will be removed and redistributed locally to support mission critical requirements or turned in to DLA for inclusion in the Navy portion of the DOD ODS reserve.

h. Navy activities requiring ODS solvents for mission critical applications after 31 December 1995 will be supplied at the local level through the use

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of recycled or reclaimed sources. If an activity determines that mission critical needs cannot be fulfilled from recycled or reclaimed sources, the activity should forward this information to Chief of Naval Operations (CNO)(N45) via its cognizant Echelon 2 command for certification of its application and procurement quantity in order that a unusual use production exemption can be sought from EPA.

i. It is unlawful for any person, in the course of maintaining, servicing, repairing or disposing of an appliance or industrial process refrigerant to knowingly vent or otherwise knowingly release or dispose of any Class I or Class II ODS used as a refrigerant in such appliance or industrial process refrigerant in a manner which permits the substance to enter the environment. De Minimis releases associated with good faith attempts to recapture and recycle or safely dispose of Class I and Class II ODSs are not subject to the preceding sentence.

j. EPA-approved refrigerant recovery equipment will be used for all commercial off-the-shelf equipment. For military-unique systems, recovery equipment will be designed to the extent practical to achieve performance comparable to that required of commercial equipment by the EPA.

k. All Navy military and civilian refrigerant technicians will be certified as per reference (e), Subpart F.

l. New and converted HVAC&R equipment will include refrigerant isolation valves and service apertures to facilitate recovery and recycling procedures in accordance with reference (c) rulemaking requirements.

m. Intentional releases of halon during the service, maintenance, repair and disposal of any fire fighting equipment will be illegal as of 15 November 1994.

n. Navy activities will use EPA SNAP-approved alternatives with an ODP of zero, whenever possible. If no EPA SNAP-approved alternatives with an ODP of zero exist, activities shall adopt ODS alternatives with an ODP of 0.05 or less for HVAC&R equipment or 0.2 for fire fighting equipment. Activities should consider the production phaseout schedule for most Class II ODSs begins in 2000 and is subject to possible acceleration.

o. ODS refrigerants are considered hazardous material (HM) and are subject to the requirements of this instruction as well as references (b) and (f). Under 56 Federal Register (FR) 5910, EPA issued an interim final rule that suspends the toxicity characterization of used Class I and Class II ODS refrigerants obtained with enclosed recycling systems provided the refrigerant is reclaimed and intended for further use. Therefore, used Class I and Class II ODS refrigerants that are recycled for future use will not be considered hazardous waste under federal law; however, where they are more restrictive, state and local ODS regulations apply.

p. Conservation practices for all ODSs including regular system leak checks, improved supply management, and recycling and reclamation of Class I and Class II ODSs will be used to the extent practical.

q. As required by reference (a), information on ODS demand quantities for Navy use will be collected and reported annually to COMNAVSUPSYSCOM.

r. Surveys on ODS demand will be conducted annually by COMNAVSUPSYSCOM for all ships, shore activities and GO/CO facilities. All Navy activities, tenant activities and ships will report demand of ODSs purchased outside the Naval Supply System in accordance with enclosure (2) by not later than 1 February of each year.

s. All operational, training and testing practices will be reviewed and modified to reduce and eliminate emissions of ODSs to the maximum extent possible.

t. Navy activities having any information regarding new emerging technologies and alternatives for the elimination of ODSs should contact Commander, Naval Sea Systems Command (COMNAVSEASYSYSCOM (SEA 03V2)) for incorporation into Navy's CFC/Halon Information Clearinghouse (CHIC). Furthermore, activities may request information on ODS alternatives by contacting the CHIC through COMNAVSEASYSYSCOM.

u. No Navy activity will sell any Class I ODS outside the Navy without written permission from the Chief of Naval Operations. Excess Class I ODSs will be deposited into the Navy portion of the DOD ODS reserve.

v. HVAC&R equipment determined to be usable when turned into the Defense Reutilization and

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Marking Service (DRMS) will be labelled to indicate the equipment contains an ODS. Activities transferring HVAC&R equipment to DRMS for disposal as scrap must recover the ODS prior to disposal. This also applies to small appliances.

w. Requests for waivers to the provisions of this instruction will be submitted to the Chief of Naval Operations via the chain of command. For such waivers, an activity must demonstrate the application of this instruction is impractical or results in the expenditure of resources which are not commensurate with the resultant reduction in the potential for unintentional release of ODSs to the environment. Statutory requirements will not be waived.

8. Responsibilities and Actions

a. OPNAV Principal Officials. Within the Office of the Chief of Naval Operations (OPNAV), the following actions and responsibilities are assigned:

(1) Deputy Chief of Naval Operations (Logistics) will:

(a) Annually review in conjunction with the Directors of Warfare Divisions and Director of Test & Evaluation and Technology Requirements the adequacy of ODSs programs and resources.

(b) Submit an annual demand report on ODSs to the Assistant Secretary of the Navy (Installations and Environment) for submittal to the Deputy Under Secretary of Defense (Environment Security) as required by reference (a) (DD 2530 applies).

(c) Review all requests for waivers to this instruction and forward recommendations to the Assistant Secretary of the Navy (Installations and Environment).

(2) Director of Test and Evaluation and Technology Requirements will: Annually review the adequacy of programmed funds and schedules, including test and evaluation, to achieve the research and development (R&D) policies established in this instruction and reference (a).

b. Echelon 2 Commands

(1) All Echelon 2 commands will:

(a) Implement the policies and procedures of this instruction and ensure that annual reporting requirements outlined in this instruction are correctly followed by their activities.

(b) Identify in their Program Objectives Memorandum (POM), process funding for elimination, recycling and substitution of ODSs. R&D requirements will be coordinated with COMNAVSEASYS COM (SEA 03V2) to avoid redundant efforts. All funding requirements from Echelon 2 commands will be coordinated with CNO (N4) and forwarded directly to the appropriate resource sponsor. Funding requirements should include:

1. Estimates of resource requirements including costs associated with the revisions to military specifications referencing the use of ODSs.

2. Assignment of responsibilities within their respective organization.

3. Description of specific projects for the elimination, recycling or substitution of ODSs with estimates on emission/use reduction, cost and completion date.

(c) Develop and evaluate on a periodic basis reserve requirements for cognizant applications of ODSs and coordinate with COMNAVSUPSYSCOM. Requirements will only be developed for mission critical uses.

(d) Revise preventive and corrective maintenance procedures, for which they are the cognizant activity, to incorporate the use of ODS recovery and recycling units.

(e) Revise military specifications and manuals, for which they are the cognizant activity, to reduce or eliminate references to the use of ODSs.

(f) Participate in ODS consortiums, conferences and technology transfer to ensure Navy's interests are identified and satisfied.

(g) Submit a semi-annual report by letter to CNO (N45) by not later than 1 October and 1 July on the status of elimination of ODSs in specifications and standards for which the Echelon 2 command is the cognizant authority. The report will include: (1) the total number of specifications and standards containing ODSs over which they have

14 July 1994

cognizant authority from the date of this instruction. (2) the number of specifications and standards which reference an ODS that were revised to remove the reference to ODSs during this period, (3) total number of specifications and standards which reference an ODS that have been changed from the date of this instruction, and (4) any impediments to removing ODSs from specifications or standards and actions taken to resolve impediments. For those Echelon 2 commands not holding cognizant authority over any specifications or standards a one-time negative report is required.

(b) Review all requests from subordinate activities for waivers to this instruction and forward recommendations to Deputy Chief of Naval Operations (Logistics) (DCNO(Logs)).

(2) COMNAVSEASYS COM will:

(a) Serve as the lead technical Echelon 2 command to coordinate technical ODSs programs of the other Echelon 2 commands to ensure all Navy wide common interests and concerns are addressed.

(b) Conduct quarterly program status meetings with the major claimants to gather and disseminate information and determine progress made by Navy activities.

(c) Maintain Navy's CFC/Halon Information Clearinghouse (CHIC) for use by all Navy activities.

(d) Coordinate cognizant R&D activities with other services and government agencies.

(3) COMNAV SUPSYSCOM will:

(a) Serve as the Navy liaison with DLA on matters pertaining to the establishment, maintenance and operation of the ODS reserve.

(b) Provide annually by 15 March of each year, a report to CNO (N4) on Navy demand of ODSs per enclosure (2) (DD 2530 applies).

(c) Revise, as necessary, acquisition instructions and guidance to include additional ODSs as they are regulated by the EPA.

(d) Assist Echelon 2 commands with the ODS recycling and reclamation program.

(e) Incorporate into the Navy supply system, refrigerant and halon recovery and recycling equipment and appropriate spare parts as soon as possible after contract award and notification by other Echelon 2 commands.

(4) Commander, Naval Facilities Engineering Command (COMNAV FACENG COM) will:

(a) Develop, and revise as necessary, guidance for Navy shore activities on requirements for air conditioning and fire protection systems.

(b) Develop a guide scope for analyzing shore-based HVAC&R equipment and providing recommendations to commanding officers on the most cost effective manner of replacing, converting, or retrofitting existing HVAC&R systems.

(5) Chief, Bureau of Medicine and Surgery will provide workplace hazard evaluations and health risk assessments for ODS substitutes, which are proposed for use in industrial operations and Navy-unique working environments, as requested by other Echelon 2 commands.

(6) Chief of Naval Education and Training will:

(a) Develop training procedures using safe alternatives to ODSs where consistent with operational requirements without degradation to mission effectiveness.

(b) Incorporate ODS issues into hazardous material control and management training.

(c) Incorporate ODS issues into enlisted class A and class C schools and officer training courses as appropriate.

(d) Incorporate training in the proper use of ODS recovery and recycling equipment into HVAC&R technician curriculums.

(e) Ensure training in the proper use of ODS recovery and recycling equipment is incorporated into the Navy Environmental Training Plan.

c. Commanding Officers

(1) Commanding officers ashore and afloat will:

14 July 1994

(a) Report demand of ODSs purchased outside of the Naval Supply System on DD 2530 (enclosure (2)). Annual report will be submitted not later than 1 February of each year to COMNAVSUPSYSCOM (SUP 45) with an information copy to the chain of command.

(b) Implement appropriate ODSs procurement guidance as established by COMNAVSUPSYSCOM, COMNAVFACENGCOM, and other Echelon 2 commands.

(c) Ensure ODSs are included in the "authorized HM use list."

(d) Establish practices and procedures internally to reduce emissions of ODSs as much as possible.

(e) Provide resources (tuition, travel, per diem, etc.) for training refrigerant technicians on recovery and recycling equipment and ensure compliance with applicable certification requirements.

(f) Submit requests for waivers to any of the mandatory provisions of this policy via the chain of command to the DCNO(Logs). Statutory requirements may not be waived.

(2) Commanding officers ashore will:

(a) Develop and implement an ODS phase out plan to eliminate use of non-mission critical Class I ODSs by 1 January 2000.

(b) Approve and submit plans to claimants for review and funding in the POM cycle.

9. Reports. The following reports are approved for 3 years from the date of this instruction.

Report Symbol	Title	Paragraph
OPNAV 5090-7	Status of Elimination of ODSs in Specifications and Standards	Sb(1)g.
OPNAV 5090-8	Ozone Depleting Substances Annual Report	Sb(3)b(1) & Sb(1)h(1)

10. Form. DD 2530 (12-92), Ozone Depleting Chemicals Annual Report, is provided as enclosure (2).

S. R. ARTHUR
Vice Chief of Naval Operations

Distribution:
SNDL Parts 1 and 2

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LIST OF CLASS I AND CLASS II CHEMICALS

CLASS II CHEMICAL AGENTS HCFC - Hydrochlorofluorocarbon

		ODP
HCFC-11	Trichlorofluoromethane	
HCFC-12	Dichlorodifluoromethane	
HCFC-13	Chlorotrifluoromethane	0.05
HCFC-111	Trichlorofluoroethane	
HCFC-112	Dichlorodifluoroethane	
HCFC-113	Trichlorotrifluoroethane	0.02
HCFC-114	Tetrachloroethane	0.02
HCFC-115	Pentachloroethane	0.02
HCFC-116	Hexachloroethane	
HCFC-123	Trichlorotrifluoroethane	
HCFC-124	Dichlorotetrafluoroethane	0.1
HCFC-125	Chloropentafluoroethane	0.05
HCFC-133	Trichlorotrifluoropropane	
HCFC-134	Dichlorotetrafluoropropane	
HCFC-135	Chloropentafluoropropane	
HCFC-136	Hexachloropropane	
HCFC-137	Heptachloropropane	
HCFC-138	Octachloropropane	
HCFC-139	Nonachloropropane	
HCFC-140	Tetrachlorodifluoropropane	
HCFC-141	Trichlorotrifluoropropane	
HCFC-142	Dichlorotetrafluoropropane	
HCFC-143	Chloropentafluoropropane	
HCFC-144	Tetrachlorodifluoropropane	
HCFC-145	Trichlorotrifluoropropane	
HCFC-146	Dichlorotetrafluoropropane	
HCFC-147	Chloropentafluoropropane	
HCFC-148	Hexachloropropane	
HCFC-149	Heptachloropropane	
HCFC-150	Octachloropropane	
HCFC-151	Nonachloropropane	
HCFC-152	Tetrachlorodifluoropropane	
HCFC-153	Trichlorotrifluoropropane	
HCFC-154	Dichlorotetrafluoropropane	
HCFC-155	Chloropentafluoropropane	
HCFC-156	Hexachloropropane	
HCFC-157	Heptachloropropane	
HCFC-158	Octachloropropane	
HCFC-159	Nonachloropropane	

1. Public Law 101-549 15 November 1990 Clean Air Act Amendments, Title VI

2. Ozone Depletion Potential as stated in §602 of the Clean Air Act Amendments

3. Azeotropic mixture of CFC-12 and Hydrofluorocarbon (HFC) 152a.

4. Azeotropic mixture of CFC-113 and HCFC-22

5. Azeotropic mixture of CFC-113 and HFC-23

Enclosure 1

2

7-7-4

OPNAVINST 5090.2A
1 JUL 1994

OZONE DEPLETING CHEMICALS ANNUAL REPORT					
REPORT COVER SHEET					
1. QUANTITIES (in thousands of pounds)					
CHEMICAL a	PROJ. QUANTITY (in thousands of pounds) b	RESERVE QUANTITY (in thousands of pounds) c	COMPONENT DEMAND (including local purchases) d	NEW SYSTEM ACQUISITIONS e	CALENDAR YEAR
(1) CFC 11					
(2) CFC 12					
(3) CFC 113					
(4) CFC 114					
(5) CFC 115					
(6) HCFC 22					
(7) HCFC 123					
(8) HCFC 124					
(9) HCFC 125					
(10) HALON 1211					
(11) HALON 1301					
(12) HALON 2402					
(13) METHYL CHLORIDE					
(14) CARBON TETRACHLORIDE					
(15) PCE					
(16) PERC					
(17) NITRO FLUOR					
Total 2500 DEC 92					

Enclosure (2)



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, DC 20362-5101

95502
OPR: 05R
Ser 05R/186
27 July 1990

From: Commander, Naval Sea Systems Command
To: Commander, David Taylor Research Center (Code 2722)
Subj: FACILITY FOR NAVY CHLOROFLUOROCARBON (CFC) REFRIGERANTS
PROJECT; JUSTIFICATION FOR

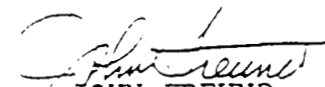
Ref: (a) SECNAVINST 5090.5 of 20 November 1989, "Management and Elimination of Ozone Depleting Substances"
(b) OPNAVINST 5090.2 of 22 January 1990, "Management of Ozone Depleting Substances"
(c) U.S. Navy's Chlorofluorocarbon (CFC)/Halon Program Plan of October, 1989 (Revised December, 1989)

1. References (a) and (b) direct the Navy to identify and develop suitable substitute chemicals and alternative technologies to accelerate the phase-out of the Navy's use of ozone depleting substances (chlorinated fluorocarbons used by the Navy as shipboard refrigerants and solvents). NAVSEA is now executing the Navy's CFC/Halon Program detailed in the CNO-approved Program Plan (reference (c)).

2. As the Navy's primary research and development center for shipboard auxiliary and environmental control equipment, the David Taylor Research Center will execute the majority of substitute refrigerant and alternative technology research and development as required by references (a) and (b) and as described in the Refrigerants Project section of reference (c).

3. The accelerated timetable for a complete phase-out of CFCs mandated by the Montreal Protocol re-negotiations and U.S. EPA regulations create an urgent and unanticipated requirement for the expansion of DTRC test facilities. This expansion is necessary to accomplish the R&D which will be required to ensure a timely transition of new technology to shipboard air conditioning and refrigeration equipment.

4. NAVSEA POC is Art Smookler, 05R32, (703) 602-3841/2


JOHN FREUND
By direction

BSAT REQUEST FOR CLARIFICATION -- DJD 024

**REQUEST FOR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)**

Control # DJD 024
Activity: NSWC Carderock Div (Annapolis)

Date sent: 12 Dec 94

ATTN: Jim Logan or Judith Atkins Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

1. Estimate the one-time moving costs of relocating (not replicating) the non-CPC facilities from Annapolis to NSWC-Philadelphia. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the reassembly, assembly and calibration costs separately.

I need this information NLT 1400, 15 December.

~~Don DoYoung~~ (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply:

R. E. METREY

Name

01

Code

(301) 227-1628

Commercial Phone #

13 DEC 94

Date

DEC 12 '94 08:19PM NSAC
TOTAL 7401

P.3/3

22 Dec 1994

11 -- 128

ADP4 BC:LT 1661-21-204

1. **QUESTION:** Estimate the one-time moving costs of relocating (not replicating) the non-CFC facilities from Annapolis to NSWC-Philadelphia. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the reassembly <disassembly>, assembly and calibration costs separately.

Reponse: The total weight of mission equipment being moved in a relocation from NSWC-Annapolis to NSWC-Philadelphia is estimated at 450 tons and there are no anticipated special shipping costs. The one time moving costs of \$11.2M is broken down as \$700K disassembly, \$5900K reassembly and \$4600K calibration as discussed below.

Some background information and definitions may be helpful in clearing up any confusion caused by the numerous questions and answers on this topic (DJD 014, DJD 016, DJD 017 and DJD 023).

It is important to distinguish between the **non-CFC facilities** at NSWC Annapolis and the **shipboard cooling systems** installed at Annapolis in these facilities.

The following shipboard cooling systems are installed and operational in the Annapolis facilities: CG 47, DDG 51, SSN 21, SSN 688, SSBN 726, CVN 68, LHD 1 and LSD 44. The following are in process: DD 963, DDG 993, AOE 6, and LCC 19. The total replacement value of this shipboard full scale equipment is \$9M.

Retargetting "in process" AC plants for installation at a "relocated" NSWC-Philadelphia site could potentially save some baselining costs of approximately \$1M. However, no facility costs would be saved since the facilities to accommodate the installed and planned equipment are currently in place and operational in Annapolis. Also, such a retargetting would result in an additional delay of more than one year in program execution for these systems based on a mismatch between anticipated equipment delivery schedule and the Philadelphia facility availability.

It is presumed in all the relocation responses that the shipboard cooling equipment would be relocated. Only in the one replication response (DJD 023 of 9 December 1994 Question 3) would this equipment be replaced. The \$9M equipment replacement cost is for the equipment alone and does not include installation, debugging, instrumentation, calibration, and baseline data generation which has been completed or is in the process of being generated.

The non-CFC facilities consist of three functionally separate facilities -refrigeration plant development facility, centrifugal compressor development facility (CCDF), and the shipboard AC plant development facilities which are also referred to as cooling system dynamometers (CSD). All of these facilities are integrated sharing cooling water, instrumentation and personnel. These facilities were custom designed by NSWC Annapolis engineers for the unique Annapolis environment (Severn River heat rejection and for the space/locations made available) and then constructed on site by NSWC Annapolis shop personnel.

The CCDF and CSD are absolutely essential for the R&D process to succeed in the development and qualification of modifications for shipboard cooling systems to operate with environmentally acceptable refrigerants. The CCDF allows precision measurement of centrifugal compressor performance in the actual fluid. This performance cannot be measured on the cooling system because of the compact design of these plants which produces flow distortions entering the compressor. The CSDs create and maintain a precise cooling load (capacity) for the plant at a precise head (condenser water entering temperature) condition. These conditions must be created and maintained for extended periods and varied in precise steps to fully document the performance of the system with the current refrigerant and then with the replacement refrigerant (after modification of the system) to ensure that the same performance, power consumption and acoustic signature is being produced by the modified plant. There are six duplex (capable of serving two plants at independent conditions) CSDs at Annapolis.

Each of these facilities consists of certain key components (heat exchangers, pumps, flow measuring equipment and other instrumentation, control valves, auxiliary cooling plants) and a significant amount of piping custom fitted to the installation of each facility. It is presumed that some of the key components might be relocated but the piping systems would be scrapped and refitted at the new location. Many of the key components would also be unsuitable for the new location since they were designed for the unique characteristics of the Annapolis location, i.e. the heat exchangers were designed for Severn River water cooling whereas all of the alternate locations identified in prior questions would utilize a cooling tower. Environmental factors at NSWC-Philadelphia require water tower cooling at that site also. The pumps were selected for the layout and location as installed at Annapolis. It is impossible to determine if the current pumps would be useful in the new location, so it is presumed that they would be replaced. In essence, relocation of the facilities is almost equivalent to replication of the facilities. (Again these are the facilities, not the shipboard cooling systems).

The previously cited \$11.2M relocation cost is based on the actual experience of NSWC-Annapolis in this effort and is broken down as:

Disassembly:	700K
◦ Disconnect AC plants and salvage useful equipment for relocation -(700K)	
Reassembly:	5,900K
◦ Construct six CSDs at new location - (2,500K)	
◦ Install 12 AC plants at new location - (2,400K)	
◦ Construct CCDF at new location - (1,000K)	
Calibration:	4,600K
◦ Instrument and calibrate AC plants at new location - (1,200K)	
◦ Baseline the performance of AC plants at new location - (2,400K)	
◦ Calibrate and baseline CCDF facility - (1,000K)	
Total:	11,200K

In the replication question (DJD 023), the only difference in cost (besides the shipboard cooling system acquisition cost) is the savings of \$700K in combined disconnect and salvaging cost. However, the estimated replacement cost of the key components that would not be relocated in a replication scenario would cancel this savings.

All of the relocation scenarios will result in a minimum two year delay in program execution as the current facilities are dismantled and replaced at the new location. As stated in our previous answers to DJD 014 of 6 December 1994 Question 3, this will have an adverse impact on the CFC stockpile and on fleet readiness and combat capability. A similar adverse impact would result if the in process AC plants were retargetted to NSWC-Philadelphia as discussed above.

The replication response (DJD 023) wherein the facilities and the shipboard cooling equipment are constructed at the new location theoretically will not result in any program delay. In reality however, the program schedule is likely to suffer because of the anticipated loss of skilled and experienced R&D personnel now executing the program. Replication itself, as discussed in DJD 023, will require a minimum three years to accomplish.

Previous answers to this and similar questions are summarized below:

Reference	Destination	Type	Cost	Comments
DJD 014 6 December 1994 Question 3	Contractor (York International)	Relocation	\$11.2M	Assumes adequate building and cooling tower capability.
DJD 016 7 December 1994 Question 2	NSWC Carderock	Relocation	\$21.2M	Includes cost of building and cooling tower (\$10M)
DJD 017 7 December 1994 Question 1	Shipyard	Relocation	\$11.2M	Adequate cooling tower and building assumed.
DJD 023 9 December 1994 Question 3	NSWC Philadelphia	Replication	\$20.2M	Includes replacement cost of shipboard equipment (\$9M). Assumes adequate cooling tower and building.'

BSAT REQUEST FOR CLARIFICATION -- DJD 025

REQUEST FOR CLARIFICATION BASE STRUCTURE ANALYSIS TEAM (BSAT)

Date sent: 13 Dec 94

Contact # DJD 025
Activity: NSWCC Carderock Div (Annapolis)

ATTN: Jim Logan or Judith Aldine
Fax: 703-602-0341

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # J-20-0198-005 and 035A:

1. Your response to RRC DJD 010 confirmed the cost to replicate the Magnetic Fields Lab at NSWCC-Carderock at \$145 M. Estimate the one-time moving costs of replicating the Magnetic Fields Laboratory from Annapolis to NSWCC-Carderock. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the assembly.

2. Your response to RRC DJD 010 estimated the cost to replicate the Magnetic Shielding Facility at NSWCC-Carderock at \$5.5 M. Estimate the one-time moving costs of replicating the Magnetic Shielding Facility from White Oak to NSWCC-Carderock. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the assembly and calibration costs separately.

I need this information NLT 1600, 13 December.

Don DeYoung (703) 681-0478

~~NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.~~
Reply:

Name

R.E. METREY

Code

01

Commanded Phone #

(301) 227-1628

Date

13 Dec 94

TOTAL P.02

11 -- 134

22 Dec 1994

P.3/3

DATE

TIME

474 DEC 13 '94 10:17AM NSWC

Scenario 3-20-0198-035A

Reference: Control # DJD 025

Received 1015 HRS 13 DEC 1994

Due: 1600 HRS 13 DEC 1994

1. Your response to RFC DJD 010 estimated the cost to replicate the Magnetic Fields Lab at NSWC-Carderock at \$14.5 M. Estimate the one time moving costs of relocating the Magnetic Fields Laboratory from Annapolis to NSWC-Carderock. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the reassembly <disassembly>, assembly, and recalibration costs separately.

Response: The one time moving costs of relocating the Magnetic Fields Laboratory from Annapolis to NSWC-Carderock are shown in the Table below.

Amount of Mission Equipment	65 tons
Cost of Disassembly	\$0.3 M
Cost of Non-Magnetic Building	\$7.0 M
Cost of Assembly	\$3.8 M
Cost of Recalibration	\$0.8 M

The disassembly cost includes special packing where required. The cost of the non-magnetic building includes site preparation. The assembly cost includes the cost for new equipment (that is not practical to relocate) and set up costs.

2. Your response to RFC DJD 010 estimated the cost to replicate the Magnetic Silencing Facility at NSWC-Carderock at \$5.5 M. Estimate the one time moving costs of relocating the Magnetic Silencing Facility from White Oak to NSWC-Carderock. Estimate the total tons of mission equipment involved in the move as well as any special shipping costs. Estimate the reassembly <disassembly>, assembly, and recalibration costs separately.

Response: The response to this question is more appropriately directed to the White Oak Detachment, Dahlgren Division, Naval Surface Warfare Center per telephone conversation between BSAT (DeYoung) and NSWC-CD (Metrey).

22 Dec 1994

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BSAT REQUEST FOR CLARIFICATION -- DJD 026

**REQUES' - JR CLARIFICATION
BASE STRUCTURE ANALYSIS TEAM (BSAT)**

Control # DJD 026

Activity: NSWC Cardrock Div (Ammapolis)

Date sent: 13 Dec 94

ATTN: Jim Logan or Judith Atkins

Fax: 703-602-0541

CLARIFICATION / CORRECTION REQUESTED for Scenario Development Data Call # 3-20-0198-035 and 035A:

RE: Response to DJD 025

1. Cost of Non-Magnetic Building: Report the amount of space (in square feet) necessary for the non-magnetic building.
2. Cost of Assembly: Breakout the cost for new equipment and the set-up costs separately. Also, who will perform the assembly?

I need this information NLT 1400, 14 December.

Don DeYoung (703) 681-0478

NOTE: This information is needed urgently. Request you respond with clarification comments (below) or corrected page(s). FAX a preliminary response directly to the BSAT at (703) 756-2174. Then, send your official response, properly certified, through your chain of command for certification and further forwarding to the BSAT. Official documentation must be retained to support your response and be available for validation by the Naval Audit Service.

Reply: _____

R.E. METREY

Name

01

Code

(301) 227-1628

Commercial Phone #

14 DEC 94

Date

22 Dec 1994

II -- 138

Scenario 3-20-0198-035A

Reference: Control # DJD 026

Received 0900 HRS 14 DEC 1994

Due: 1400 HRS 14 DEC 1994

1. Cost of Non-Magnetic Building: Report the amount of space (in square feet) necessary for the non-magnetic building.

Response:

The response to this question is based upon buildings to support consolidation of Annapolis and White Oak magnetic silencing capabilities at Carderock. The total floor area required is 19,175 square feet. This area is comprised of two buildings - a non-magnetic test building (8,400 sq ft) and an instrumentation building (10,875 sq ft). Two buildings are required because the testing must be conducted in a "magnetically clean" environment and the instrumentation required to conduct the measurements create significant magnetic fields.

The test building must be constructed of non-magnetic materials (i.e., wood, concrete, aluminum, brass, and copper) and fasteners so as not to influence the magnetic measurements being taken. The building must have four (4) levels on which magnetic sensors are deployed. The current test floor is 42 FT x 50 FT with an overhead clearance of 20 FT. The test floor is the top floor and must be accessible for loading and unloading large test items (such as a diesel generator). The test floor must be capable of withstanding at least forty-four (44) tons of dynamic load. The entrance door to the test floor must be at least 12 FT wide by 14 FT tall. Each of the three (3) lower floors must have an overhead height of 10 FT to accommodate magnetic field measurements to a level of 30 FT below the item being tested. The site of the test building must be in a magnetically clean area (no large pieces of ferrous material located within a sphere of radius 300 FT centered on the test building). No vehicular traffic can pass through any portion of the sphere during testing. The test building must have provisions to accommodate the following:

- supply of fuel for engines being tested
- provisions for the removal of engine exhaust
- supply of cooling water for water cooled systems/components
- electrical power supplies covering the following ranges:
 - 0 - 2,400 amperes
 - 3 phase
 - 60 Hz and 400 Hz
 - 115 volts, 220 volts, and 440 volts

to support motors, load banks, and water brakes for engines and generators undergoing testing.

The instrumentation building must be located outside the 300 FT sphere centered on the test building but close enough so that the equipment being tested (such as diesel engines) can be operated safely from a remote location. The instrumentation building has been sized to consolidate the areas listed below that are currently accommodated in several individual buildings.

general laboratory	5,250 sq ft
instrumentation	2,250 sq ft
magnetic model storage	2,000 sq ft
staging area	825 sq ft
sensors laboratory	550 sq ft

2. **Cost of Assembly:** Breakout the cost for new equipment and the set-up costs separately. Also, who will perform the assembly?

Response:

Cost of New Equipment	\$ 2.4 M
Set-up Cost - Contract / Labor	\$ 0.2 M
Set-up Cost - Installation	\$ 1.2 M

The new equipment cost is based upon a detailed study conducted in the Spring of FY 93 in preparation for moving the Magnetic Fields Laboratory as part of BRAC-93. It was determined then that the following equipment was not practical to move:

- Direct Current power supplies
- Water rheostats
- Ambient field coil systems with power supplies
- Quad cables
- Computer equipment
- Miscellaneous equipment including: moisture sensor, ladders, spare cables, spare rope, drill presses, grinders, isolation transformers, tanks, exhaust pipes, engine control panels, etc.

The set-up costs consist of labor costs associated with the procurement new equipment.

The installation costs include the set-up and integration of the relocated and new equipment. This work will be done by Carderock Division personnel (transferred from both Annapolis and White Oak).

DRAFT

15 March 1995

From: David Epstein
To: BSAT

Don DeYoung

Via: (1) Alex Yellin

Subj: Navy Technical Facilities -- Naval Surface Warfare Center Carderock,
Detachment Annapolis (hereafter, NSWC Annapolis)

27 Sep
6 Oct
17 Nov
28 Nov
9 Dec

Date
Call

1. The following questions deal with the mission of NSWC Annapolis
- Are there any pieces of equipment which must be left in Annapolis and reused?
 - How often must these items be reused?
 - For each weapon system, explain what is happening to the program; among other aspects of the program's future, where is continued RDT&E, if any, going to be conducted
 - Provide the names, phone numbers of the Navy project managers at NAVSEA, NAVAIR, etc. who are responsible for the major projects which are or were recently being performed at Annapolis. Indicate the number of WY performed and funding provided on each project during FY93, 94, and 95 (to date). The list of projects should include at least the two largest projects for each major systems at Annapolis and at least one project for lesser equipment..

2. The following questions deal with the Joint Spectrum Center, the primary tenant of NSWC Annapolis:

- Explain the reasons, if any, for Joint Spectrum Center being located on a military or other secure compound. Does the current location satisfy this requirement. If so, how? If not, why not or what would have to be done to make the location satisfactory?
- Explain the reasons, if any, for Joint Spectrum Center being located in an electronically or magnetically "quiet" environment. Does the current location satisfy this requirement. If so, how? If not, why not or what would have to be done to make the location satisfactory?
- For each lease involving Joint Spectrum Center or its primary contractors in the Washington-Baltimore-Annapolis area, list the annual rent, the number of square feet involved, special facilities, special requirements, and the date the lease expires (including an explanation of any options available to landlord and tenant).

19 Dec
22 Dec
27 Dec
27 Dec
9 Feb

Don't
have
12 Dec
pg
plan a

3. The COBRA which was prepared for the selected scenario reflects a savings with a net present value of about \$174 Million. It would appear that this represent a high level decision involving a trade off of economics vs. military readiness. Although there is probably no specific dollar level at which the BSEC would say that the savings is so large that we have to close NSWC, please comment on how the BSEC would have acted if the NPV savings had only been \$150 M? \$100 M? \$50 M? or \$0?

We do not

W.A. No
lease
cost

4. If NSWC Annapolis is closed, who will do the work which can not be performed since there will be fewer employees in the post BRAC-95 scenario and NSWC Annapolis already has more work than it can handle? If this work will be performed by contractor personnel, please estimate the number of WYs to be performed by contractors and the cost to the Navy of an average contractor WY.

5. Does the Navy anticipate that after the closure of NSWC Annapolis and the Magnetic Testing facility at NSWC White Oak, that any of the facilities will have to be refurbished, reconstructed, developed by contractors to the Government, or in any way physically replaced? If so, what would the estimated cost of each system most likely be? (Please break down your response by facility/major capability.)

6. Does the Navy anticipate that after the closure of NSWC Annapolis and the Magnetic Testing facility at NSWC, it will have to develop computer simulation models or other methods of analyzing new weapons systems or parts thereof which until now have been done through tests conducted at NSWC Annapolis or the Magnetic Testing facility at Annapolis? What computer systems will have to be developed and what is their estimated cost? (Please break down your response by facility/major capability.)

7. How important was military value in deciding which technical facilities to propose for closure, particularly with respect to NSWC Annapolis. If only certain aspects of military value were key in the decision with respect to NSWC Annapolis, please identify and explain.

8. What are the reuse plans, if any, for NSWC? Do any of these plans involve building condominium, private homes, a Navy lodge, a Navy retirement home or any other form of residence for current or retired military personnel?

Don DeYoung

~~SECRET~~

DRAFT

2212 Rayburn

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Table 5.1, Technical Staff Education Level for
(Activity: NSWC-Annapolis (Main Site)) (UIC: 61533) Pre BRAC 91*

Highest Degree Attained	Years of Government and/or Military Service					Total
	Less than 3 Years	3-10 Years	11-15 Years	16-20 Years	More than 20 Years	
Grade School	0	2	2	2	1	7
High School	3	35	32	31	65	166
B.A./ B.S	5	84	28	17	84	218
M.A./ M.S	2	61	28	13	80	184
Ph.D./ M.D.	5	13	5	4	22	49
Total	15	195	95	67	252	624

Table 5.1, Technical Staff Education Level for
(Activity: NSWC-Annapolis (NIKE SITE)) (UIC: 61533)

Highest Degree Attained	Years of Government and/or Military Service					Total
	Less than 3 Years	3-10 Years	11-15 Years	16-20 Years	More than 20 Years	
Grade School	0	0	0	0	0	0
High School	0	0	1	0	2	3
B.A./ B.S	0	1	2	0	2	8
M.A./ M.S	0	0	0	2	0	2
Ph.D./ M.D.	0	0	0	0	0	0
Total	0	1	3	2	7	13

* Before departure of Survivability, Structure & Materials Directorate
(Code 60) in compliance with BRAC 91.

Table 5.1, Technical Staff Education Level for
(Activity: NWSC-ANNAPOLIS) (UIC: 61533)

POST BRAC 91*

Highest Degree Attained	Years of Government and/or Military Service					Total
	Less than 3 Years	3-10 Years	11-15 Years	16-20 Years	More than 20 Years	
Grade School	0	2	2	2	1	7
High School	3	27	23	19	48	120
B.A./B.S	3	60	20	8	68	159
M.A./M.S	1	48	18	5	51	123
Ph.D./M.D.	4	5	2	2	12	25
Total	11	142	65	36	180	434

*After departure of Survivability, Structure & Materials Directorate
(Code 60) in compliance with BRAC 91.

5. Technical Staff Qualifications.

a. Use Table 5.1 (below) to provide data on the civilian personnel allocated to Technical Operations having the educational and experience levels indicated in the table for your activity. Report data as of 31 March 1994. Similarly, use Table 5.2 (below) to provide data for all your separate detachments or sites that did not receive this data call directly. Consolidate data from all of these detachments into one table (5.2). Provide a list of the detachments whose data is included in Table 5.2.

**Table 5.1, Technical Staff Education Level for
(Activity: NAVSSES (PHILA)) (UIC:65540)**

Highest Degree Attained	Years of Government and/or Military Service					Total
	Less than 3 Years	3-10 Years	11-15 Years	16-20 Years	More than 20 Years	
Grade School	0	10	3	5	2	20
High School	20	185	171	126	120	622
B.A./B.S	26	400	126	54	86	692
M.A./M.S	1	26	16	11	21	75
Ph.D./M.D.	0	0	0	0	1	1
Total	47	627	316	196	230	1410

NOTE: Includes FTP personnel except Directorate 30 (Does include Department. 36)
Technical Operations definition above given by Joe Crowder of Carderock CDNSWC

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BRAC-95 Scenario Development Data Call Tasking

Scenario Number:	3-20-0198-035
Scenario Title:	NSWC Annapolis

Due Date:	1300 EST, 20 November 1994
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Description of Closure/Realignment Scenario

Close NSWC Det Annapolis, including special area (NIKE Site). Consolidate at NSWC Philadelphia. Use existing facilities at other locations in place of those at NSWC Annapolis.

Preparation of a Scenario Development Data Call response for the closure/realignment scenario described above is mandatory. The lead major claimant **may** submit a **separate, additional** Scenario Development Data Call response, which while not changing the base(s) identified as being closed/realigned, does identify alternative receiving sites. If an additional response is submitted, identify this response as Scenario Number 3-20-0198-035A.

BSAT Points of Contact

Any questions concerning this specific closure/realignment scenario should be addressed to the BSAT Technical Centers Team at (703) 681-0491. General questions regarding COBRA or other costing issues should be addressed to Mr. David Wennergren at (703) 681-0466.

BRAC-95 SCENARIO DEVELOPMENT DATA CALL

ATTACHMENT 1: BASE LOADING DATA

Activity: **61533** NSWC CARDEROCK DIV DET ANNAPOLIS

PART 1: MANPOWER DATA - HOST AND TENANTS. This data is provided to assist you in identifying military billets and civilian positions which will either be relocated or eliminated as a result of closure or realignment. Officer (OFF), Enlisted (ENL) and Civilian (CIV) numbers reflect end strength, not on-board counts. The "Planned Force Structure Reduction" column represents the difference between projected "Beginning of FY 1996" and projected "End of FY 2001" end strength. The source of this data is the BUPERS/NAVCOMPT/CMC data bases in support of the FY 1996/1997 OSD Submit. Review this list and make any necessary annotations, including the addition or deletion of lines of data to accurately reflect the host and tenant population. Note that Military Students (STU) must be shown as an Average On-Board (AOB) count. If a significant student population is located at the activity, then all students need to be identified in this table. Student data need only be provided for the "End of FY 2001" column of the table. If any numbers are changed, please provide a revised set of totals at the end of the listing.

UIC	NAME	MAJOR CLAIMANT	BEGIN FY 1996				PLANNED FORCE STRUCTURE CHANGES				END FY 2001			
			OFF	ENL	CIV	STU	OFF	ENL	CIV	STU	OFF	ENL	CIV	STU
N 61533	NSWC CARDEROCK DIV DET	COMNAVSEASYS	2	0	0	0	-1	0	0	0	1	0	0	0
61533	NSWC CARDEROCK	COMNAVSEASYS	0	0	725	0	0	0	-307	0	0	0	418	0
		TOTALS:	2	0	725	0	-1	0	-307	0	1	0	418	0

BRAC-95 SCENARIO DEVELOPMENT DATA CALL

ATTACHMENT 1: BASE LOADING DATA

PART 5: TOTAL FACILITY SQUARE FEET. This is the total Class 2 facility square feet, excluding family housing, MWR and utilities, as reported in the Naval Facilities Assets Data Base (NFADB). This figure is used in determining the number of square feet which will be "shut down" as a result of the closure action.

Total Facility Square Feet (in thousands): 0

PART 6: BASE OPERATING SUPPORT (BOS) COST DATA. This is the total BOS costs reported for the host and tenant activities in Data Call 66. Please review this data and ensure that it is consistent with FY 1996 OSD Submit budget data. If BOS cost data needs to be revised, specific revisions should be noted on a revised copy of the appropriate Data Call 66 table(s), which should then be returned with this data call response.

			***** O&M, etc. *****				***** DBOF *****				***** TOTAL *****			
UIC	NAME	MAJOR CLAIMANT	RPMA NONPAY	RPMA PAY	OBOS NONPAY	OBOS PAY	RPMA NONPAY	RPMA PAY	OBOS NONPAY	OBOS PAY	RPMA NONPAY	RPMA PAY	OBOS NONPAY	OBOS PAY
61533	NSWC CARDEROCK DIV DET	COMNAVSEASYSCO	3	3	0	0	2741	960	6086	6799	2744	963	6086	6799
TOTALS:			3	3	0	0	2741	960	6086	6799	2744	963	6086	6799

BRAC-95 SCENARIO DEVELOPMENT DATA CALL

ATTACHMENT 1: BASE LOADING DATA

PART 7: CONTRACT WORKYEAR DATA. This is the total contract workyear data reported by the host and tenant activities in Data Call 66. Please review this data, especially the columns regarding contract workyears which will either be eliminated or transferred as a result of the closure/realignment action. Sum of workyears transferred + eliminated + remaining at activity must equal Total Contract Workyears. Annotate corrections as necessary.

UIC	NAME	MAJOR CLAIMANT	TOTAL CONTRACT WORKYEARS	NO. OF WORK-YEARS TO BE TRANSFERRED	NO. OF WORK-YEARS TO BE ELIMINATED	NO. OF WORK-YEARS REMAINING AT ACTIVITY
61533	NSWC CARDEROCK DIV DET	COMNAVSEASYS	102	77	20	4
TOTALS:			102	77	20	4

BSAT

**Department of the Navy
Base Structure Analysis Team**

**BRAC-95 Scenario Development Data Call Tasking
URGENT**

To: Mr. Jim Logan		
Organization : NAUSEA		
Fax Number : 602-0541	Date : 11/18/94	Time : 1130

Complete a BRAC-95 Scenario Development Data Call response for the closure/realignment scenario(s) outlined on the next page. A Base Loading Data Attachment (Attachment One to the Scenario Development Data Call) for each losing base involved in the scenario has been provided with this fax tasking. General guidance in preparing data call responses is provided below. Specific guidance on the closure/realignment scenario is provided on the next page.

In developing your Data Call response, every effort should be made to minimize the costs associated with the closure action and to ensure that completion of the action takes place as rapidly as possible. The BSEC tasking for this scenario may include specific directions on the relocation of functions/organizations. In the absence of specific direction from the BSEC, only essential functions, equipment, etc., should be relocated. All others should be eliminated/excessed. To this end, for any activity identified as being relocated in your data call response (with the exception of relocations specifically identified by the BSEC), you must provide a detailed narrative explanation on the specific operational requirement that supports movement to another location as opposed to elimination of the activity.

As the lead major claimant for this data call response, it is your responsibility to ensure that all necessary coordination with other major claimants and consolidation/summarization of responses is completed prior to submitting a data call response. Contact the BSAT if you need a POC list for other major claimants.

As detailed in the Scenario Development Data Call format, the following data submission and certification procedures will be followed. An advance copy of the completed data call response, along with a major claimant-level certification, will be either hand carried or faxed to the BSAT by the lead major claimant. The original copy of the data call response must be forwarded, via the chain of command, as soon as possible thereafter.

Due date for submission of the advance copy of the data call response, along with POCs on the BSAT for this scenario, are provided on the next page. Every effort must be made to ensure that data calls are submitted on time. Primary fax number for the BSAT for Scenario Development Data Call responses is (703) 756-2172. An alternate fax number is (703) 756-2174. Due to the size of some of these data call responses, major claimants in the Washington, DC area should try to hand deliver, rather than fax their responses.

*** * * * *** **48 Hour Turnaround Required** *** * * * ***

Number of Pages, including cover page: 55

URGENT

BRAC-95 Scenario Development Data Call Tasking

Base Loading Data Attachment

A Base Loading Data Attachment (Attachment One to the Scenario Development Data Call) is provided, with this fax, for each base in the scenario which is being considered for closure/realignment. See pages 3 - 4 of the Introduction to the Scenario Development Data Call, and the text accompanying each part of this Attachment, for more information on the use of the Base Loading Data Attachment in responding to Scenario Development Data Call taskings. The Base Loading Data Attachment is composed of the following seven parts (note that parts 5 and 6 are shown on the same page):

Part 1: Manpower Data - Host and Tenants. Table is a listing of the host activity and all tenant activities at the base. Manpower numbers (end strength) are shown for the start of FY 1996 (End FY 1995) and the end of FY 2001 (the difference between these two columns being the planned force structure changes).

Part 2: Manpower Data - Detachments. Table is a listing of detachments of the activity being considered for closure/realignment.

Part 3: Manpower Data - Special Use Areas. Table is a listing of "special use areas" of the activity being considered for closure/realignment.

Part 4: Manpower Data - Non-Department of the Navy (DON) Tenants. Table is a listing of the Non-DON tenant activities at the base.

Part 5: Total Facility Square Feet. Total Class 2 facility square feet at the base, excluding family housing, MWR and utilities, as reported in the Naval Facilities Assets Data Base(NFADB).

Part 6: Base Operating Support (BOS) Cost Data. FY 1996 BOS Costs, regardless of appropriation, as reported in Data Call 66 response(s).

Part 7: Contract Workyear Data. Contract Workyear data, as reported in Data Call 66 response(s).

If a blank page is printed rather than one of the "Parts" of the Base Loading Data Attachment, then no records were found for this particular table (e.g., the activity had no detachments, etc.).

Each Scenario should be considered as a distinct, stand alone closure/realignment alternative.

Document Separator

Scenario 3-20-0198-035A

Reference: Control # DJD 027

Received: 2200 HRS 02 JUN 1995

Due: 1600 HRS 05 JUN 1995

1. **QUESTION:** Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. U.S. Navy submarine hulls can be tested by employing scale models of undersea hull structures. What pressure tanks perform this type of work for the U.S. Navy? Where are they located? Could undersea vehicles, similar to the PISCES IV last tested in the Annapolis facility in 1983, be tested in this manner?

Response:

The Annapolis Deep Ocean Vehicle & Machinery Pressure Simulation Facility can test scale models of submarine hulls but more importantly because of its size and depth rating, it can test full scale deep ocean systems and equipment. Most of the Navy's submarine hull model testing is done at the pressure vessel facility at the NSWC, Carderock Division, Carderock site. When large models for composite, deep depth submersible hull structures are required, the large pressure tank at Annapolis will be needed to meet these future model testing requirements.

Almost all of this type of work for the Navy is done within the Carderock Division, either at Annapolis or Carderock site. Other facilities such as Southwest Research Institute or Lockheed-Martin Marietta can do some small model pressure testing, but testing of models with a diameter greater than 4 feet at U.S. submarine collapse depth pressures must be done at NSWC Carderock Division. However, larger models are needed to validate fabrication techniques as well as structural designs. These larger models can only be tested to submarine design collapse depth pressures in the Carderock Division facilities.

Undersea vehicles, similar to the PISCES IV, can not be tested in this manner. The PISCES IV test was not a hull structure test, per se. It was a complete vehicle systems certification test. The vehicle was tested in its operational condition with all equipment on board, all systems operating, and the crew in place. Scale model testing could not have accomplished this test.

2. **QUESTION:** Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. Machinery systems which are too large to be tested in existing pressure tanks can be broken into smaller component so that they can be accommodated into existing pressure tanks. Could undersea vehicles, similar to the PISCES IV last tested in the Annapolis facility in 1983, be tested in this manner?

Response:

No. Complete system tests are required to demonstrate that all components and their interactions are tested, preferably simultaneously. The PISCES IV test could not have been tested in this manner because the PISCES IV test was a vehicle system certification test. The purpose of the test was to demonstrate that the total vehicle system worked not that each of its parts worked. If only component parts testing had been accomplished, the vehicle system would have then required an additional test, probably at sea, for final certification.

However, the Annapolis facility has been used recently to test major subsystems. The 500 Hour First Article Test for the USS SEAWOLF (SSN-21) Take Home Motor was conducted in the facility in April 1993. The only other viable alternative to the Annapolis test facility was to install the system on an operational submarine. Installation of the system, external to the pressure hull, would have resulted in significant impact to the submarine schedule. The failure of a part of the system during the test required the removal, redesign, and reinstallation of the part prior to the successful completion of the test. The facility afforded a rapid turn around capability which might not have been available if the test was conducted on an actual submarine. Three actual production units are scheduled to be tested in the facility starting in January 1996.

In January 1995, both manipulator arms for the U.S. Navy's SEA CLIFF (DSV-4) vehicle were tested in the facility. These manipulator arms were statically tested in a commercial pressure
NSWC-Annapolis
DJD-027

vessel prior to their installation on SEA CLIFF. At sea, the manipulator arms failed to operate properly. After repeated attempts to identify and correct the problem on SEA CLIFF, the manipulator arms were taken to the Annapolis facility to be tested as a system. With sufficient volume available to operate the arms, at the required submergence pressure, the arms were operationally tested. The installed television capability allowed the observation of the manipulator joints undergoing binding and actually leaking hydraulic fluid in several different test configurations. The manipulator arm deficiencies are now in the process of being corrected.

3. QUESTION: Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. Computer-aided design has proven accurate in the simulation of sea conditions. Could undersea vehicles, similar to the PISCES IV last tested in the Annapolis facility in 1983, be tested in this manner? Are mathematical models being used to design the hull structure of new submarines?

Response:

Computer simulation capability leading to "virtual reality" is progressing rapidly, but cannot be substituted for tests like those conducted on PISCES IV in 1983.

The PISCES test was a complete full scale system test. It was not a design study type of test. Computer modeling is used to help design submersible systems but it is no substitute for actual full scale system testing. This applies to unmanned remotely operated vehicles as well as manned vehicles. Deep ocean systems need full scale real time testing to ensure proper operation.

Mathematical models for submarine hull structures are becoming more and more sophisticated, but can not replace the need for pressure tank tests. The complex computer design methods are generally aimed at improving designs, addressing issues which were previously handled in an excessively conservative manner. These sophisticated mathematical models are developed and verified using large diameter hull model tests, before their use in actual hull structure design programs leading to certification tests.

A current example of mathematical models being used to design the hull structure of new submarines is the use of a new and proven analytical method to assess the dynamic strength of submarine pressure hulls subjected to underwater explosion. The procedure was developed and validated with experimental tests on small scale models in the 10 foot diameter spherical pressure tank certified for explosive testing at the Carderock site. The procedure has been incorporated into the New SSN specifications. Further development of even more sophisticated mathematical models and procedures is continuing, coupling pressure tank and larger scale, at sea test with computerized methods. Future submarine hulls will have more assured survivability against explosion.

4. QUESTION: Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. In addition to certifying U.S. Navy submarines, what other pressure hulls have the pressure tanks at NSWC-Carderock certified?

Response:

The following pressure hulls have been certified in tests:

at the Carderock site:

Dry Deck Shelter
ALVIN
SEA CLIFF
Nautil (French)
Shinkai 6500 (Japanese)
Composite Diving Suit

at the Annapolis Site:

DSRV II
Saturation Diver Transport Capsule
DSRV III (Planned for Fall 1995)

Classes of submarine hulls that have been certified in pressure tank tests at the Carderock site include the OHIO (SSBN-726), STURGEON (SSN-637), LOS ANGELES (SSN-688), SAN JUAN (SSN-751), and SEAWOLF (SSN-21). The New SSN hull is currently in the certification process. These tests involve large models, 5 feet to 10 feet in diameter. In addition, in each case there are numerous tests at both small and large scale prior to the final certification tests. All new submarine classes include increased requirements, such as large missile tubes, depth, size, material, configuration, and cost reduction features, that demand development / adaptation of design procedures and their validation before application to the new hull. For the New SSN, for example, the need to use more cost effective weld procedures has led to a series of six 10 foot diameter hull model tests that must be completed before the configuration models are tested.

5. QUESTION: Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. Given that a manned undersea vehicle has not been tested in the Annapolis facility since 1983, and given the various alternatives to such testing, is there any reason to believe that manned testing would be required by the U.S. Navy in the future? If so, please explain why, and what would be the frequency of this requirement?

Response:

Yes, there is reason to believe that manned testing will be required by the U.S. Navy in the future. Manned submersible testing requirements are a function of the frequency at which these submersibles are constructed and or overhauled. As the time since the last manned submersible was tested increases, the likelihood that a subsequent test will be required also increases for an existing manned submersible after an overhaul as well as prior to the initial deep dive of a newly constructed manned submersible. The need for this kind of testing is based, at least in part, upon safety considerations for the crew. Regardless of the design, the manned submersible must be tested at actual submergence pressure to ensure that water does not leak into the compartments housing people. There are only two ways to do this. The first way is to build a facility, such as the one at Annapolis, in which the submersible can be placed. The pressure which the entire submersible experiences is then raised, in a controlled manner, to the required level. If a problem should occur, the pressure can be removed in an expeditious manner. The total amount of water capable of leaking into the submersible is also constrained. The other way is to conduct the test at sea, in as much of a controlled manner as is possible. This is the manner in which full size submarines are tested. If a problem occurs, damage control action by the crew and returning to the surface are the available remedies. The time required to return to the surface for a deep diving manned submersible can be prohibitive in the face of a leak / flooding casualty due to improper assembly of a component or system exposed to submergence pressure.

A major subsystem of a full sized, manned submersible was tested in April 1993. The SEAWOLF Class Take Home Motor was tested in the Annapolis facility primarily because of the cost, schedule, and convenience considerations. No other facility, other than at sea, could meet the requirements of the test. In January, 1995, the manipulator arms for the SEA CLIFF (DSV-4) were tested in the Annapolis facility. No other facility could provide, at the required submergence pressure, the volume necessary for the testing.

The full capabilities of the Deep Ocean Machinery and Vehicle Pressure Simulation Facility were demonstrated in the testing of the Cable-controlled Underwater Recovery Vehicle (CURV III) in April 1993. Though an unmanned system, this series of tests demonstrated the ability of the CURV III vehicle to operate as a complete system at a depth of 20,000 feet beneath the ocean surface.

The actual frequency of this requirement is unknown. This response is predicated on the assumption that there will be continued need for manned submersibles and/or manned submersible development programs in the future.

6. QUESTION: Re: Deep Ocean Machinery & Vehicle Pressure Simulation Facility. For each year since the facility was built, how many tests of manned undersea vehicles have been conducted in this facility for the U.S. Navy?

Response:

The Deep Ocean Vehicle and Machinery Pressure Simulation facility at Annapolis has performed pressure tests on five submersibles with the crew inside the submersible during the test. This is referred to as a "manned test". The first manned test was conducted on the submersible DEEP STAR 2000 in 1970. This was the very first time a manned test was performed in any pressure vessel anywhere in the world. The following is a list of the manned submersible tests that have been performed in this facility:

1970	DEEP STAR 2000	Westinghouse (Navy Project)
1973	ALVIN	Woods Hole Oceanographic Institution / Office of Naval Research
1978	MERMAID II	Private
1979	KITTEREDGE K-600	Private
1983	PISCES IV	Canada

NSWC-Annapolis is not aware of any manned submersible testing conducted in any other pressure test facility.

7. QUESTION: Re: Submarine Fluid Dynamics Facility. What requirements that have been provided by the Annapolis facility could not have been met by other water flow testing facilities (e.g., the Hydrodynamic Laboratory at NRL, the Water Tunnel Facility at NCCOSC)? What is unique about each requirement that other facilities cannot meet it? What alternatives other than at-sea testing are available to satisfy those unique requirements? How often do these unique requirements arise?

Response:

The unique requirements which the Annapolis facility possesses that cannot be met by other water flow testing facilities are the combination of high pressure fluid, high fluid flow rates, and extremely low noise. NSWC-Annapolis cannot provide certified information on other facilities such as those listed in the question. However, water tunnels can generally meet the flow requirements, but cannot be used for high pressure applications. Water tunnels are typically used for low pressure cavitation studies with viewing ports and are not intended nor designed for use with high pressure fluids. Additionally, water tunnels are closed loop systems which require an energy source to keep the fluid flowing. This energy source will interfere with low noise acoustic testing.

No other facility has a large capacity water tank coupled with a high pressure, high capacity air system which can provide the high pressure, high flow, low noise capabilities required for components such as the SSN-21 Depth Control Valve. The Annapolis facility also provides the Computer Duration Method transient noise analysis required for SSN-21 components. No other flow facility has this unique combination of capabilities. Even at-sea testing in many cases does not provide a viable alternative due to time, cost, and safety considerations.

The Submarine Fluid Dynamics Facility is utilized all year round. Recent SSN-21 and New SSN (NSSN) component testing has kept the water portion of the facility in operation full time between three and six months each year. The facility is configured so that the water portion

and the air portion of the facility can be operated independently. However, several tests require the presence of both the water portion and the air portion simultaneously.

8. QUESTION: Re: Submarine Fluid Dynamics Facility. What requirements that have been provided by the Annapolis facility could not have been met by other air system testing facilities (e.g., NSWC Philadelphia)? What is unique about each requirement that other facilities cannot meet? What alternatives other than at sea testing are available to satisfy those unique requirements? How often do these unique requirements arise?

Response:

The unique air requirement which is provided by the Annapolis facility is the ability to provide high pressure, high capacity air quietly. Because of the 960 Cu. Ft. capacity @ 4200 Psi storage capacity, high pressure air can be delivered quietly to test submarine components. This storage capacity is in the progress of being upgraded to 960 Cu. Ft. @ 5000 Psi. The limited storage capacity at other locations would require the use of high pressure air compressors to be running during the tests in order to meet the necessary capacity. The noise generated by these compressors make it impossible to measure noise on a quiet component. NSWC Philadelphia currently has a storage capacity of 250 Cu. Ft. @ 5000 Psi and an additional 250 Cu. Ft. @ 3000 Psi. The rate at which NSWC-Philadelphia can recharge its storage capacity, with high pressure air compressors, is 1600 lbm/min, roughly four times that of NSWC-Annapolis. NSWC-Philadelphia is scheduled to upgrade their storage capacity to 550 Cu. Ft. @ 5000 Psi and 250 Cu. Ft. @ 3000 Psi in 1996.

Another unique capability of the Annapolis facility is the ability to provide large volumes of high pressure water, at large flow rates, in conjunction with the air systems requirements.

The Submarine Fluid Dynamics Facility is utilized all year round. Recent SSN-21 and other component testing have kept the air portion of the facility in operation full time between six and nine months each year. The facility is configured so that the water portion and the air portion of the facility can be operated independently. However, several tests require the presence of both the water portion and the air portion simultaneously.

See corrected
COBRA (BSAT)
IN FILE 6B

Document Separator

2

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Starting Year : 1996
Final Year : 1998
ROI Year : 1999 (1 Year)

NPV in 2015(\$K): -175,072
1-Time Cost(\$K): 25,036

Net Costs (\$K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
MilCon	8,000	0	0	0	0	0	8,000	0
Person	43	-2,546	-6,557	-7,623	-7,623	-7,623	-31,928	-7,623
Overhd	974	-1,115	-5,268	-6,904	-6,904	-6,904	-26,122	-6,904
Moving	2,199	3,943	712	0	0	0	6,854	0
Missio	0	0	0	0	0	0	0	0
Other	3,787	2,723	3	0	0	0	6,513	0
TOTAL	15,004	3,005	-11,110	-14,527	-14,527	-14,527	-36,683	-14,527

	1996	1997	1998	1999	2000	2001	Total
POSITIONS ELIMINATED							
Off	0	0	1	0	0	0	1
Enl	0	0	0	0	0	0	0
Civ	6	98	34	0	0	0	138
TOT	6	98	35	0	0	0	139

	1996	1997	1998	1999	2000	2001	Total
POSITIONS REALIGNED							
Off	1	0	0	0	0	0	1
Enl	0	0	0	0	0	0	0
Stu	0	0	0	0	0	0	0
Civ	117	149	14	0	0	0	280
TOT	118	149	14	0	0	0	281

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

SCENARIO 035A

Original COBA

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Costs (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	-----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	219	474	111	13	13	13	845	13
Overhd	1,394	2,176	1,680	1,073	1,073	1,073	8,469	1,073
Moving	2,199	3,943	712	0	0	0	6,854	0
Missio	0	0	0	0	0	0	0	0
Other	3,787	2,723	3	0	0	0	6,513	0
TOTAL	15,599	9,316	2,506	1,087	1,087	1,037	30,681	1,087

Savings (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	-----
MilCon	0	0	0	0	0	0	0	0
Person	176	3,020	6,668	7,636	7,636	7,636	32,773	7,636
Overhd	419	3,291	6,948	7,977	7,977	7,977	34,591	7,977
Moving	0	0	0	0	0	0	0	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	595	6,311	13,616	15,614	15,614	15,614	67,365	15,614

TOTAL ONE-TIME COST REPORT (COBRA v5.08) - Page 1/6
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	8,000,000	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		8,000,000
Personnel		
Civilian RIF	490,605	
Civilian Early Retirement	196,898	
Civilian New Hires	0	
Eliminated Military PCS	4,527	
Unemployment	72,036	
Total - Personnel		764,066
Overhead		
Program Planning Support	2,118,581	
Mothball / Shutdown	786,250	
Total - Overhead		2,904,831
Moving		
Civilian Moving	5,105,742	
Civilian PPS	1,209,600	
Military Moving	0	
Freight	538,897	
One-Time Moving Costs	0	
Total - Moving		6,854,239
Other		
HAP / RSE	0	
Environmental Mitigation Costs	125,000	
One-Time Unique Costs	6,388,000	
Total - Other		6,513,000

Total One-Time Costs		25,036,137

One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	

Total One-Time Savings		0

Total Net One-Time Costs		25,036,137

ONE-TIME COST REPORT (COBRA v5.08) - Page 2/6
 Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD
 (All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	490,605	
Civilian Early Retirement	196,898	
Civilian New Hires	0	
Eliminated Military PCS	4,527	
Unemployment	72,036	
Total - Personnel		764,066
Overhead		
Program Planning Support	2,118,581	
Mothball / Shutdown	786,250	
Total - Overhead		2,904,831
Moving		
Civilian Moving	5,105,742	
Civilian PPS	1,209,600	
Military Moving	0	
Freight	538,897	
One-Time Moving Costs	0	
Total - Moving		6,854,239
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	15,000	
Total - Other		15,000
Total One-Time Costs		10,538,137
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		10,538,137

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC CARDEROCK, MD
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	8,000,000	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		8,000,000
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	125,000	
One-Time Unique Costs	2,400,000	
Total - Other		2,525,000
Total One-Time Costs		10,525,000
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		10,525,000

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N950B0F.SFF

Base: NSWC PHILADELPHIA, PA
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	3,873,000	
Total - Other		3,873,000
Total One-Time Costs		3,873,000
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		3,873,000

ONE-TIME COST REPORT (COBRA v5.08) - Page 5/6
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NRL, DC
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	100,000	
Total - Other		100,000
-----		-----
Total One-Time Costs		100,000
-----		-----
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
-----		-----
Total One-Time Savings		0
-----		-----
Total Net One-Time Costs		100,000

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: LEASED SPACE, MD
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
Total - Other		0
Total One-Time Costs		0
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		0

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

All Costs in \$K

Base Name	Total MilCon	IMA Cost	Land Purch	Cost Avoid	Total Cost
NSWC ANNAPOLIS	0	0	0	0	0
NSWC CARDEROCK	8,000	0	0	0	8,000
NSWC PHILADELPHIA	0	0	0	0	0
NRL	0	0	0	0	0
LEASED SPACE	0	0	0	0	0
Totals:	8,000	0	0	0	8,000

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

MilCon for Base: NSWC CARDEROCK, MD

All Costs in \$K

Description:	MilCon Categ	Using Rehab	Rehab Cost*	New MilCon	New Cost*	Total Cost*
Materials & Process.	RDT&E	0	n/a	10,000	n/a	1,000
MFL & MSF	RDT&E	0	n/a	8,400	n/a	7,000

Total Construction Cost:						8,000
+ Info Management Account:						0
+ Land Purchases:						0
- Construction Cost Avoid:						0

TOTAL:						8,000

* All MilCon Costs include Design, Site Preparation, Contingency Planning, and SIOH Costs where applicable.

PERSONNEL SUMMARY REPORT (COBRA v5.08)
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

PERSONNEL SUMMARY FOR: NSWC ANNAPOLIS, MD

BASE POPULATION (FY 1996):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
2	0	0	725

FORCE STRUCTURE CHANGES:

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	-307	0	0	0	0	0	-307
TOTAL	-307	0	0	0	0	0	-307

BASE POPULATION (Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
2	0	0	418

PERSONNEL REALIGNMENTS:

To Base: NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

To Base: NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	107	140	14	0	0	0	261
TOTAL	107	140	14	0	0	0	261

TOTAL PERSONNEL REALIGNMENTS (Out of NSWC ANNAPOLIS, MD):

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	117	149	14	0	0	0	280
TOTAL	118	149	14	0	0	0	281

SCENARIO POSITION CHANGES:

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	-1	0	0	0	-1
Enlisted	0	0	0	0	0	0	0
Civilians	-6	-98	-34	0	0	0	-138
TOTAL	-6	-98	-35	0	0	0	-139

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

PERSONNEL SUMMARY REPORT (COBRA v5.08) - Page 2
 Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

PERSONNEL SUMMARY FOR: NSWC CARDEROCK, MD

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
12	2	0	1,366

PERSONNEL REALIGNMENTS:

From Base: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

TOTAL PERSONNEL REALIGNMENTS (Into NSWC CARDEROCK, MD):

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
13	2	0	1,385

PERSONNEL SUMMARY FOR: NSWC PHILADELPHIA, PA

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
6	11	0	1,498

PERSONNEL REALIGNMENTS:

From Base: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	107	140	14	0	0	0	261
TOTAL	107	140	14	0	0	0	261

TOTAL PERSONNEL REALIGNMENTS (Into NSWC PHILADELPHIA, PA):

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	107	140	14	0	0	0	261
TOTAL	107	140	14	0	0	0	261

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
6	11	0	1,759

PERSONNEL SUMMARY REPORT (COBRA v5.08) - Page 3
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

PERSONNEL SUMMARY FOR: NRL, DC

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
371	285	0	3,201

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
371	285	0	3,201

PERSONNEL SUMMARY FOR: LEASED SPACE, MD

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

TOTAL PERSONNEL IMPACT REPORT (COBRA v5.08) - Page 1/6
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N950BOF.SFF

	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		117	149	14	0	0	0	280
Early Retirement*	10.00%	11	14	1	0	0	0	26
Regular Retirement*	5.00%	5	7	1	0	0	0	13
Civilian Turnover*	15.00%	16	21	2	0	0	0	39
Civs Not Moving (RIFs)*+		6	8	1	0	0	0	15
Civilians Moving (the remainder)		79	99	9	0	0	0	187
Civilian Positions Available		38	50	5	0	0	0	93
CIVILIAN POSITIONS ELIMINATED		6	98	34	0	0	0	138
Early Retirement	10.00%	1	10	3	0	0	0	14
Regular Retirement	5.00%	0	5	2	0	0	0	7
Civilian Turnover	15.00%	1	15	5	0	0	0	21
Civs Not Moving (RIFs)*+		0	6	2	0	0	0	8
Priority Placement#	60.00%	4	59	20	0	0	0	83
Civilians Available to Move		0	3	2	0	0	0	5
Civilians Moving		0	3	2	0	0	0	5
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		117	149	14	0	0	0	280
Civilians Moving		79	102	11	0	0	0	192
New Civilians Hired		38	47	3	0	0	0	88
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		12	24	4	0	0	0	40
TOTAL CIVILIAN RIFs		6	14	3	0	0	0	23
TOTAL CIVILIAN PRIORITY PLACEMENTS#		4	59	20	0	0	0	83
TOTAL CIVILIAN NEW HIRES		38	47	3	0	0	0	88

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

+ The Percentage of Civilians Not Willing to Move (Voluntary RIFs) varies from base to base.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95080F.SFF

Base: NSWC ANNAPOLIS, MD	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		117	149	14	0	0	0	280
Early Retirement*	10.00%	11	14	1	0	0	0	26
Regular Retirement*	5.00%	5	7	1	0	0	0	13
Civilian Turnover*	15.00%	16	21	2	0	0	0	39
Civs Not Moving (RIFs)*	6.00%	6	8	1	0	0	0	15
Civilians Moving (the remainder)		79	99	9	0	0	0	187
Civilian Positions Available		38	50	5	0	0	0	93
CIVILIAN POSITIONS ELIMINATED		6	98	34	0	0	0	138
Early Retirement	10.00%	1	10	3	0	0	0	14
Regular Retirement	5.00%	0	5	2	0	0	0	7
Civilian Turnover	15.00%	1	15	5	0	0	0	21
Civs Not Moving (RIFs)*	6.00%	0	6	2	0	0	0	8
Priority Placement#	60.00%	4	59	20	0	0	0	83
Civilians Available to Move		0	3	2	0	0	0	5
Civilians Moving		0	3	2	0	0	0	5
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		12	24	4	0	0	0	40
TOTAL CIVILIAN RIFS		6	14	3	0	0	0	23
TOTAL CIVILIAN PRIORITY PLACEMENTS#		4	59	20	0	0	0	83
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC CARDEROCK, MD	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		10	9	0	0	0	0	19
Civilians Moving		10	9	0	0	0	0	19
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		107	140	14	0	0	0	261
Civilians Moving		69	93	11	0	0	0	173
New Civilians Hired		38	47	3	0	0	0	88
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		38	47	3	0	0	0	88

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N950BOF.SFF

Base: NRL, DC	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: LEASED SPACE, MD	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	0.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	0.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 1/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

ONE-TIME COSTS -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	8,000	0	0	0	0	0	8,000
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIF	128	299	64	0	0	0	491
Civ Retire	59	118	20	0	0	0	197
CIV MOVING							
Per Diem	257	347	41	0	0	0	646
POV Miles	1	2	0	0	0	0	4
Home Purch	784	1,057	125	0	0	0	1,967
HHG	440	593	70	0	0	0	1,103
Misc	48	65	8	0	0	0	121
House Hunt	155	209	25	0	0	0	389
PPS	58	864	288	0	0	0	1,209
RITA	349	471	56	0	0	0	875
FREIGHT							
Packing	20	25	3	0	0	0	48
Freight	85	309	96	0	0	0	491
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	19	44	9	0	0	0	72
OTHER							
Program Plan	916	687	515	0	0	0	2,118
Shutdown	232	462	92	0	0	0	786
New Hire	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	4	0	0	0	4
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	125	0	0	0	0	0	125
Info Manage	0	0	0	0	0	0	0
1-Time Other	3,662	2,723	3	0	0	0	6,388
TOTAL ONE-TIME	15,340	8,276	1,420	0	0	0	25,036

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 2/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	-----	-----	-----	-----	-----	-----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	30	30	30	30	121	30
BOS	245	505	522	522	522	522	2,838	522
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	13	13	13	13	13	13	81	13
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	259	1,040	1,087	1,087	1,087	1,087	5,645	1,087
TOTAL COST	15,599	9,316	2,506	1,087	1,087	1,087	30,681	1,087
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	-----	-----	-----	-----	-----	-----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	-----	-----	-----	-----	-----	-----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	379	1,544	2,549	2,744	2,744	2,744	12,704	2,744
BOS	40	1,747	4,399	5,233	5,233	5,233	21,887	5,233
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	164	3,008	6,618	7,548	7,548	7,548	32,433	7,548
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	38	77	77	77	269	77
Enl Salary	0	0	0	0	0	0	0	0
House Allow	12	12	12	12	12	12	71	12
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	595	6,311	13,616	15,614	15,614	15,614	67,365	15,614
TOTAL SAVINGS	595	6,311	13,616	15,614	15,614	15,614	67,365	15,614

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 3/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	8,000	0	0	0	0	0	8,000	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	187	417	84	0	0	0	687	
Civ Moving	2,199	3,943	712	0	0	0	6,854	
Other	1,167	1,193	616	0	0	0	2,977	
MIL PERSONNEL								
Mil Moving	0	0	4	0	0	0	4	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	125	0	0	0	0	0	125	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	3,662	2,723	3	0	0	0	6,388	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	15,340	8,276	1,420	0	0	0	25,036	
RECURRING NET	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	-379	-1,544	-2,518	-2,714	-2,714	-2,714	-12,582	-2,714
BOS	205	-1,241	-3,878	-4,712	-4,712	-4,712	-19,049	-4,712
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	-164	-3,008	-6,618	-7,548	-7,548	-7,548	-32,433	-7,548
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	-38	-77	-77	-77	-269	-77
House Allow	2	2	2	2	2	2	10	2
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	-336	-5,271	-12,530	-14,527	-14,527	-14,527	-61,719	-14,527
TOTAL NET COST	15,004	3,005	-11,110	-14,527	-14,527	-14,527	-36,683	-14,527

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 4/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD	1996	1997	1998	1999	2000	2001	Total
ONE-TIME COSTS	-----	-----	-----	-----	-----	-----	-----
-----(\$K)-----	-----	-----	-----	-----	-----	-----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	128	299	64	0	0	0	491
Civ Retire	59	118	20	0	0	0	197
CIV MOVING							
Per Diem	257	347	41	0	0	0	646
POV Miles	1	2	0	0	0	0	4
Home Purch	784	1,057	125	0	0	0	1,967
HHG	440	593	70	0	0	0	1,103
Misc	48	65	8	0	0	0	121
House Hunt	155	209	25	0	0	0	389
PPS	58	864	288	0	0	0	1,209
RITA	349	471	56	0	0	0	875
FREIGHT							
Packing	20	25	3	0	0	0	48
Freight	85	309	96	0	0	0	491
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	19	44	9	0	0	0	72
OTHER							
Program Plan	916	687	515	0	0	0	2,118
Shutdown	232	462	92	0	0	0	786
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	4	0	0	0	4
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	15	0	0	0	0	0	15
TOTAL ONE-TIME	3,568	5,553	1,417	0	0	0	10,538

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 5/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD	1996	1997	1998	1999	2000	2001	Total	Beyond
RECURRINGCOSTS								
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
 TOTAL COSTS	 3,568	 5,553	 1,417	 0	 0	 0	 10,538	 0
ONE-TIME SAVES								
-----(\$K)-----	----	----	----	----	----	----	-----	-----
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRINGSAVES								
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	379	1,544	2,549	2,744	2,744	2,744	12,704	2,744
BOS	40	1,747	4,399	5,233	5,233	5,233	21,887	5,233
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	164	3,008	6,618	7,548	7,548	7,548	32,433	7,548
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	38	77	77	77	269	77
Enl Salary	0	0	0	0	0	0	0	0
House Allow	12	12	12	12	12	12	71	12
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	595	6,311	13,616	15,614	15,614	15,614	67,365	15,614
 TOTAL SAVINGS	 595	 6,311	 13,616	 15,614	 15,614	 15,614	 67,365	 15,614

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 6/18
Data As Of 16:21 12/14/1994, Report Created 12:15 02/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD

ONE-TIME NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
O&M							
Civ Retir/RIF	187	417	84	0	0	0	687
Civ Moving	2,199	3,943	712	0	0	0	6,854
Other	1,167	1,193	616	0	0	0	2,977
MIL PERSONNEL							
Mil Moving	0	0	4	0	0	0	4
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	15	0	0	0	0	0	15
Land	0	0	0	0	0	0	0
TOTAL ONE-TIME	3,568	5,553	1,417	0	0	0	10,538

RECURRING NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	-379	-1,544	-2,549	-2,744	-2,744	-2,744	-12,704	-2,744
BOS	-40	-1,747	-4,399	-5,233	-5,233	-5,233	-21,887	-5,233
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	-164	-3,008	-6,618	-7,548	-7,548	-7,548	-32,433	-7,548
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	-38	-77	-77	-77	-269	-77
House Allow	-12	-12	-12	-12	-12	-12	-71	-12
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	-595	-6,311	-13,616	-15,614	-15,614	-15,614	-67,365	-15,614
TOTAL NET COST	2,973	-758	-12,200	-15,614	-15,614	-15,614	-56,827	-15,614

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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC CARDEROCK, MD	1996	1997	1998	1999	2000	2001	Total
ONE-TIME COSTS	-----	-----	-----	-----	-----	-----	-----
-----(\$K)-----							
CONSTRUCTION							
MILCON	8,000	0	0	0	0	0	8,000
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	125	0	0	0	0	0	125
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	2,400	0	0	0	0	2,400
TOTAL ONE-TIME	8,125	2,400	0	0	0	0	10,525

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 9/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC CARDEROCK, MD

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	8,000	0	0	0	0	0	8,000	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	125	0	0	0	0	0	125	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	2,400	0	0	0	0	2,400	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	8,125	2,400	0	0	0	0	10,525	
RECURRING NET	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	30	30	30	30	121	30
BOS	112	203	203	203	203	203	1,126	203
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	13	13	13	13	13	13	81	13
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	125	216	247	247	247	247	1,328	247
TOTAL NET COST	8,250	2,616	247	247	247	247	11,853	247

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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA

ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	3,647	223	3	0	0	0	3,873
TOTAL ONE-TIME	3,647	223	3	0	0	0	3,873

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 12/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA

ONE-TIME NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	3,647	223	3	0	0	0	3,873	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	3,647	223	3	0	0	0	3,873	
RECURRING NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	134	302	319	319	319	319	1,712	319
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	134	823	840	840	840	840	4,317	840
TOTAL NET COST	3,781	1,046	843	840	840	840	8,190	840

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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NRL, DC							
ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	100	0	0	0	0	100
TOTAL ONE-TIME	0	100	0	0	0	0	100

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 14/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N950BQF.SFF

Base: NRL, DC								
RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL COSTS	0	100	0	0	0	0	100	0
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL SAVINGS	0	0	0	0	0	0	0	0

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 15/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: NRL, DC

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
O&M							
Civ Retir/RIF	0	0	0	0	0	0	0
Civ Moving	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
MIL PERSONNEL							
Mil Moving	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	100	0	0	0	0	100
Land	0	0	0	0	0	0	0
TOTAL ONE-TIME	0	100	0	0	0	0	100

RECURRING NET	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL NET COST	0	100	0	0	0	0	100	0

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 16/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

Base: LEASED SPACE, MD

ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	0	0	0	0	0	0	0

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT DATA REPORT (COBRA v5.08)
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Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
-----	-----
NSWC ANNAPOLIS, MD	Closes in FY 1998
NSWC CARDEROCK, MD	Realignment
NSWC PHILADELPHIA, PA	Realignment
NRL, DC	Realignment
LEASED SPACE, MD	Realignment

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

SCENARIO 035A

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
-----	-----	-----
NSWC ANNAPOLIS, MD	NSWC CARDEROCK, MD	41 mi
NSWC ANNAPOLIS, MD	NSWC PHILADELPHIA, PA	123 mi
NSWC ANNAPOLIS, MD	NRL, DC	34 mi
NSWC ANNAPOLIS, MD	LEASED SPACE, MD	5 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from NSWC ANNAPOLIS, MD to NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001
-----	-----	-----	-----	-----	-----	-----
Officer Positions:	1	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	10	9	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	90	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Transfers from NSWC ANNAPOLIS, MD to NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001
-----	-----	-----	-----	-----	-----	-----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	107	140	14	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	290	910	330	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from NSWC ANNAPOLIS, MD to NRL, DC

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	49	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Transfers from NSWC ANNAPOLIS, MD to LEASED SPACE, MD

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	10	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: NSWC ANNAPOLIS, MD

Total Officer Employees:	2	RPMA Non-Payroll (\$K/Year):	2,744
Total Enlisted Employees:	0	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	9,059
Total Civilian Employees:	725	BOS Payroll (\$K/Year):	6,799
Mil Families Living On Base:	18.0%	Family Housing (\$K/Year):	2
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	0.96
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	629	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	328	Activity Code:	61533
Enlisted VHA (\$/Month):	291		
Per Diem Rate (\$/Day):	110	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: NSWC CARDEROCK, MD

Total Officer Employees:	12	RPMA Non-Payroll (\$K/Year):	3,861
Total Enlisted Employees:	2	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	25,999
Total Civilian Employees:	1,366	BOS Payroll (\$K/Year):	27,595
Mil Families Living On Base:	0.0%	Family Housing (\$K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.03
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	2,174	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	462	Activity Code:	00167
Enlisted VHA (\$/Month):	316		
Per Diem Rate (\$/Day):	151	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

KS, 602

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: NSWC PHILADELPHIA, PA

Total Officer Employees:	6	RPMA Non-Payroll (\$K/Year):	830
Total Enlisted Employees:	11	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	3,560
Total Civilian Employees:	1,498	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	25.0%	Family Housing (\$K/Year):	2
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.18
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	949	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	281	Activity Code:	65540
Enlisted VHA (\$/Month):	170		
Per Diem Rate (\$/Day):	123	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: NRL, DC

Total Officer Employees:	371	RPMA Non-Payroll (\$K/Year):	30,666
Total Enlisted Employees:	285	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	45,444
Total Civilian Employees:	3,201	BOS Payroll (\$K/Year):	39,628
Mil Families Living On Base:	11.0%	Family Housing (\$K/Year):	4
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.03
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	3,400	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	462	Activity Code:	00173
Enlisted VHA (\$/Month):	316		
Per Diem Rate (\$/Day):	151	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: LEASED SPACE, MD

Total Officer Employees:	0	RPMA Non-Payroll (\$K/Year):	0
Total Enlisted Employees:	0	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	0
Total Civilian Employees:	0	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	0.0%	Family Housing (\$K/Year):	0
Civilians Not Willing To Move:	0.0%	Area Cost Factor:	0.96
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	0	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	328	Activity Code:	LOCLMD
Enlisted VHA (\$/Month):	291		
Per Diem Rate (\$/Day):	110	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	15	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	629	Perc Family Housing ShutDown:				0.0%

Name: NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	2,400	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	125	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Name: NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	3,647	223	3	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	521	521	521	521	521
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: NRL, DC

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	100	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Req'd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Name: LEASED SPACE, MD

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Req'd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

INPUT SCREEN SIX - BASE PERSONNEL INFORMATION

Name: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001
Off Force Struc Change:	0	0	0	0	0	0
Enl Force Struc Change:	0	0	0	0	0	0
Civ Force Struc Change:	-307	0	0	0	0	0
Stu Force Struc Change:	0	0	0	0	0	0
Off Scenario Change:	0	0	-1	0	0	0
Enl Scenario Change:	0	0	0	0	0	0
Civ Scenario Change:	-6	-98	-34	0	0	0
Off Change(No Sal Save):	0	0	0	0	0	0
Enl Change(No Sal Save):	0	0	0	0	0	0
Civ Change(No Sal Save):	0	0	0	0	0	0
Caretakers - Military:	0	0	0	0	0	0
Caretakers - Civilian:	0	0	0	0	0	0

Department : NAVY
 Option Package : NSWC ANNAPOLIS
 Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
 Std Fctrs File : P:\COBRA\N95DBOF.SFF

INPUT SCREEN SEVEN - BASE MILITARY CONSTRUCTION INFORMATION

Name: NSWC CARDEROCK, MD

Description	Categ	New MilCon	Rehab MilCon	Total Cost(\$K)
Materials & Process.	RDT&E	10,000	0	1,000
MFL & MSF	RDT&E	8,400	0	7,000

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	71.70%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	60.10%	Priority Placement Service:	60.00%
Enlisted Housing MilCon:	98.00%	PPS Actions Involving PCS:	50.00%
Officer Salary(\$/Year):	76,781.00	Civilian PCS Costs (\$):	28,800.00
Off BAQ with Dependents(\$):	7,925.00	Civilian New Hire Cost(\$):	0.00
Enlisted Salary(\$/Year):	33,178.00	Nat Median Home Price(\$):	114,600.00
Enl BAQ with Dependents(\$):	5,251.00	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost(\$/Week):	174.00	Max Home Sale Reimburs(\$):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary(\$/Year):	54,694.00	Max Home Purch Reimburs(\$):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	0.00%
SF File Desc:	NAVY DBOF BRAC95	RSE Homeowner Receiving Rate:	0.00%

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	75.00%
BOS Index (RPMA vs population):	0.54	Info Management Account:	0.00%
(Indices are used as exponents)		MilCon Design Rate:	9.00%
Program Management Factor:	10.00%	MilCon SIOH Rate:	6.00%
Caretaker Admin(SF/Care):	162.00	MilCon Contingency Plan Rate:	5.00%
Mothball Cost (\$/SF):	1.25	MilCon Site Preparation Rate:	39.00%
Avg Bachelor Quarters(SF):	294.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(SF):	1.00	Inflation Rate for NPV.RPT/ROI:	0.00%
APPDET.RPT Inflation Rates:			
1996: 0.00% 1997: 2.90% 1998: 3.00%		1999: 3.00% 2000: 3.00% 2001: 3.00%	

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	710	Equip Pack & Crate(\$/Ton):	284.00
HHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle(\$/Mile):	0.31
HHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle(\$/Mile):	3.38
HHG Per Mil Single (Lb):	6,400.00	POV Reimbursement(\$/Mile):	0.18
HHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	4.17
Total HHG Cost (\$/100Lb):	35.00	Routine PCS(\$/Pers/Tour):	3,763.00
Air Transport (\$/Pass Mile):	0.20	One-Time Off PCS Cost(\$):	4,527.00
Misc Exp (\$/Direct Employ):	700.00	One-Time Enl PCS Cost(\$):	1,403.00

Department : NAVY
Option Package : NSWC ANNAPOLIS
Scenario File : P:\COBRA\DONE\NSWCA1R.CBR
Std Fctrs File : P:\COBRA\N95DBOF.SFF

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	\$/UM	Category	UM	\$/UM
-----	--	----	-----	--	----
Horizontal	(SY)	61	Optional Category A	()	0
Waterfront	(LF)	10,350	Optional Category B	()	0
Air Operations	(SF)	122	Optional Category C	()	0
Operational	(SF)	111	Optional Category D	()	0
Administrative	(SF)	123	Optional Category E	()	0
School Buildings	(SF)	108	Optional Category F	()	0
Maintenance Shops	(SF)	102	Optional Category G	()	0
Bachelor Quarters	(SF)	96	Optional Category H	()	0
Family Quarters	(EA)	78,750	Optional Category I	()	0
Covered Storage	(SF)	94	Optional Category J	()	0
Dining Facilities	(SF)	165	Optional Category K	()	0
Recreation Facilities	(SF)	120	Optional Category L	()	0
Communications Facil	(SF)	165	Optional Category M	()	0
Shipyard Maintenance	(SF)	129	Optional Category N	()	0
RDT & E Facilities	(SF)	160	Optional Category O	()	0
POL Storage	(BL)	12	Optional Category P	()	0
Ammunition Storage	(SF)	160	Optional Category Q	()	0
Medical Facilities	(SF)	168	Optional Category R	()	0
Environmental	()	0			

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2
Data As Of 16:45 06/20/1995, Report Created 11:32 06/21/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95D8OF.SFF

Starting Year : 1996
Final Year : 2001
ROI Year : 2005 (4 Years)

NPV in 2015(\$K): -57,428
1-Time Cost(\$K): 55,569

Net Costs (\$K) Constant Dollars								
	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	-----	-----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	43	-1,063	-3,566	-5,015	-5,425	-6,084	-21,111	-6,584
Overhd	1,284	839	-1,668	-2,376	-2,772	-3,676	-8,369	-3,958
Moving	2,169	3,425	858	266	235	144	7,097	0
Missio	0	0	0	0	0	0	0	0
Other	9,787	11,723	9,003	2,000	2,000	2,000	36,513	0
TOTAL	21,283	14,925	4,626	-5,125	-5,962	-7,617	22,130	-10,541
	1996	1997	1998	1999	2000	2001	Total	
	----	----	----	----	----	----	-----	
POSITIONS ELIMINATED								
Off	0	0	1	0	0	0	1	
Enl	0	0	0	0	0	0	0	
Civ	6	40	41	7	8	17	119	
TOT	6	40	42	7	8	17	120	
POSITIONS REALIGNED								
Off	1	0	0	0	0	0	1	
Enl	0	0	0	0	0	0	0	
Stu	0	0	0	0	0	0	0	
Civ	116	151	18	8	6	0	299	
TOT	117	151	18	8	6	0	300	

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

THIS IS A COMMISSION MODIFIED COBRA TO CORRECT BOS NON-PAYROLL COSTS FOR
NSWC ANNAPOLIS AND NSWC PHILADELPHIA. CHANGES RPMA & BOS NON-PAYROLL TO
MATCH DOW REVISED SUBMISSION. CHANGES NUMBER OF PERS ELIMINATED AND REALIGNED.

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 2/2
Data As Of 16:45 06/20/1995, Report Created 11:32 06/21/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Costs (\$K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	219	371	121	23	23	48	806	13
Overhd	1,687	3,017	2,759	2,612	2,564	2,511	15,150	2,302
Moving	2,169	3,425	858	266	235	144	7,097	0
Missio	0	0	0	0	0	0	0	0
Other	9,787	11,723	9,003	2,000	2,000	2,000	36,513	0
TOTAL	21,862	18,536	12,740	4,902	4,823	4,702	67,566	2,316

Savings (\$K) Constant Dollars

	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	----
MilCon	0	0	0	0	0	0	0	0
Person	176	1,434	3,687	5,038	5,449	6,132	21,917	6,597
Overhd	403	2,177	4,427	4,988	5,336	6,187	23,519	6,260
Moving	0	0	0	0	0	0	0	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	579	3,611	8,115	10,027	10,784	12,319	45,435	12,857

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2
Data As Of 16:45 06/20/1995, Report Created 17:00 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DROF.SFF

Starting Year : 1996
Final Year : 2001
ROI Year : Immediate

NPV in 2015(\$K): -84,490
1-Time Cost(\$K): 25,599

4.85 Discount Rate

Net Costs (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	43	-1,063	-3,566	-5,015	-5,425	-6,084	-21,111	-6,584
Overhd	1,284	839	-1,668	-2,376	-2,772	-3,676	-8,369	-3,958
Moving	2,169	3,425	858	266	235	144	7,097	0
Missio	0	0	0	0	0	0	0	0
Other	3,793	2,732	12	2	2	2	6,543	0
TOTAL	15,289	5,934	-4,365	-7,123	-7,960	-9,615	-7,840	-10,541

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
POSITIONS ELIMINATED							
Off	0	0	1	0	0	0	1
Enl	0	0	0	0	0	0	0
Civ	6	40	41	7	8	17	119
TOT	6	40	42	7	8	17	120

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
POSITIONS REALIGNED							
Off	1	0	0	0	0	0	1
Enl	0	0	0	0	0	0	0
Stu	0	0	0	0	0	0	0
Civ	116	151	18	8	6	0	299
TOT	117	151	18	8	6	0	300

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

THIS IS A COMMISSION MODIFIED COBRA TO CORRECT BOS NON-PAYROLL COSTS FOR
NSWC ANNAPOLIS AND NSWC PHILADELPHIA. CHANGES RPMA & BOS NON-PAYROLL TO
MATCH DON REVISED SUBMISSION. CHANGES NUMBER OF PERS ELIMINATED AND REALIGNED.

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2
Data As Of 16:57 06/17/1995, Report Created 17:03 06/17/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 2
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R2.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Starting Year : 1996
Final Year : 2001
ROI Year : Immediate

NPV in 2015(\$K): -130,041
1-Time Cost(\$K): 25,311

Net Costs (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	-----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	43	-1,575	-4,235	-5,505	-6,522	-7,293	-25,087	-7,623
Overhd	1,151	377	-2,072	-2,781	-3,403	-4,132	-10,860	-4,378
Moving	2,169	3,479	566	292	203	86	6,796	0
Missio	0	0	0	0	0	0	0	0
Other	3,787	2,723	3	0	0	0	6,513	0
TOTAL	15,151	5,003	-5,737	-7,994	-9,722	-11,338	-14,638	-12,001

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	-----
POSITIONS ELIMINATED							
Off	0	0	1	0	0	0	1
Enl	0	0	0	0	0	0	0
Civ	6	60	24	20	17	11	138
TOT	6	60	25	20	17	11	139
POSITIONS REALIGNED							
Off	1	0	0	0	0	0	1
Enl	0	0	0	0	0	0	0
Stu	0	0	0	0	0	0	0
Civ	116	145	12	5	2	0	280
TOT	117	145	12	5	2	0	281

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

THIS IS A COMMISSION MODIFIED COBRA TO CORRECT BOS NON-PAYROLL COSTS FOR
NSWC ANNAPOLIS AND NSWC PHILADELPHIA. CHANGES NUMBER OF PERSONNEL ELIMINATED
AND REALIGNED.

4

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 1/2
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSUCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Starting Year : 1996
Final Year : 2001
ROI Year : 2004 (3 Years)

NPV in 2015(\$K): -81,191
1-Time Cost(\$K): 55,569

Net Costs (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	----	-----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	43	-1,063	-3,566	-5,015	-5,425	-6,084	-21,111	-6,584
Overhd	1,284	839	-1,668	-2,376	-2,772	-3,676	-8,369	-3,958
Moving	2,169	3,425	858	266	235	144	7,097	0
Missio	0	0	0	0	0	0	0	0
Other	9,787	11,723	9,003	2,000	2,000	2,000	36,513	0
TOTAL	21,283	14,925	4,626	-5,125	-5,962	-7,617	22,130	-10,541

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	-----
POSITIONS ELIMINATED							
Off	0	0	1	0	0	0	1
Enl	0	0	0	0	0	0	0
Civ	6	40	41	7	8	17	119
TOT	6	40	42	7	8	17	120

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	-----
POSITIONS REALIGNED							
Off	1	0	0	0	0	0	1
Enl	0	0	0	0	0	0	0
Stu	0	0	0	0	0	0	0
Civ	116	151	18	8	6	0	299
TOT	117	151	18	8	6	0	300

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE
AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE
SITES.

THIS IS A COMMISSION MODIFIED COBRA TO CORRECT BOS NON-PAYROLL COSTS FOR
NSWC ANNAPOLIS AND NSWC PHILADELPHIA. CHANGES RPMA & BOS NON-PAYROLL TO
MATCH DON REVISED SUBMISSION. CHANGES NUMBER OF PERS ELIMINATED AND REALIGNED.

COBRA REALIGNMENT SUMMARY (COBRA v5.08) - Page 2/2
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DOF.SFF

Costs (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	-----	-----
MilCon	8,000	0	0	0	0	0	8,000	0
Person	219	371	121	23	23	48	806	13
Overhd	1,687	3,017	2,759	2,612	2,564	2,511	15,150	2,302
Moving	2,169	3,425	858	266	235	144	7,097	0
Missio	0	0	0	0	0	0	0	0
Other	9,787	11,723	9,003	2,000	2,000	2,000	36,513	0
TOTAL	21,862	18,536	12,740	4,902	4,823	4,702	67,566	2,316

Savings (\$K) Constant Dollars	1996	1997	1998	1999	2000	2001	Total	Beyond
	----	----	----	----	----	----	-----	-----
MilCon	0	0	0	0	0	0	0	0
Person	176	1,434	3,687	5,038	5,449	6,132	21,917	6,597
Overhd	403	2,177	4,427	4,988	5,336	6,187	23,519	6,260
Moving	0	0	0	0	0	0	0	0
Missio	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
TOTAL	579	3,611	8,115	10,027	10,784	12,319	45,435	12,857

NET PRESENT VALUES REPORT (COBRA v5.08)
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Year	Cost(\$)	Adjusted Cost(\$)	NPV(\$)
----	-----	-----	-----
1996	21,283,424	20,996,678	20,996,678
1997	14,924,743	14,329,602	35,326,279
1998	4,625,820	4,322,491	39,648,771
1999	-5,125,096	-4,660,855	34,987,916
2000	-5,961,915	-5,276,762	29,711,153
2001	-7,616,763	-6,561,005	23,150,148
2002	-10,541,407	-8,837,241	14,312,907
2003	-10,541,407	-8,600,721	5,712,186
2004	-10,541,407	-8,370,531	-2,658,345
2005	-10,541,407	-8,146,502	-10,804,847
2006	-10,541,407	-7,928,469	-18,733,317
2007	-10,541,407	-7,716,272	-26,449,589
2008	-10,541,407	-7,509,754	-33,959,343
2009	-10,541,407	-7,308,763	-41,268,106
2010	-10,541,407	-7,113,151	-48,381,257
2011	-10,541,407	-6,922,775	-55,304,032
2012	-10,541,407	-6,737,494	-62,041,526
2013	-10,541,407	-6,557,172	-68,598,697
2014	-10,541,407	-6,381,675	-74,980,373
2015	-10,541,407	-6,210,876	-81,191,249

TOTAL ONE-TIME COST REPORT (COBRA v5.08) - Page 1/6
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DROF.SFF

(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	8,000,000	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		8,000,000
Personnel		
Civilian RIF	447,944	
Civilian Early Retirement	206,743	
Civilian New Hires	0	
Eliminated Military PCS	4,527	
Unemployment	65,772	
Total - Personnel		724,986
Overhead		
Program Planning Support	2,447,611	
Mothball / Shutdown	786,250	
Total - Overhead		3,233,861
Moving		
Civilian Moving	5,489,410	
Civilian PPS	1,065,600	
Military Moving	0	
Freight	542,168	
One-Time Moving Costs	0	
Total - Moving		7,097,178
Other		
HAP / RSE	0	
Environmental Mitigation Costs	125,000	
One-Time Unique Costs	36,388,000	
Total - Other		36,513,000
Total One-Time Costs		55,569,026
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		55,569,026

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\W95DBOF.SFF

Base: NSWC ANNAPOLIS, MD
 (All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	447,944	
Civilian Early Retirement	206,743	
Civilian New Hires	0	
Eliminated Military PCS	4,527	
Unemployment	65,772	
Total - Personnel		724,986
Overhead		
Program Planning Support	2,447,611	
Mothball / Shutdown	786,250	
Total - Overhead		3,233,861
Moving		
Civilian Moving	5,489,410	
Civilian PPS	1,065,600	
Military Moving	0	
Freight	542,168	
One-Time Moving Costs	0	
Total - Moving		7,097,178
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	30,015,000	
Total - Other		30,015,000
Total One-Time Costs		41,071,026
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		41,071,026

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\W95DBOF.SFF

Base: NSWC CARDEROCK, MD
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	8,000,000	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		8,000,000
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
NAP / RSE	0	
Environmental Mitigation Costs	125,000	
One-Time Unique Costs	2,400,000	
Total - Other		2,525,000
Total One-Time Costs		10,525,000
One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
Total One-Time Savings		0
Total Net One-Time Costs		10,525,000

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA
 (All values in Dollars)

Category -----	Cost ----	Sub-Total -----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
MAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	3,873,000	
Total - Other		3,873,000

Total One-Time Costs		3,873,000

One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	

Total One-Time Savings		0

Total Net One-Time Costs		3,873,000

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NRL, DC
(All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	100,000	
Total - Other		100,000

Total One-Time Costs		100,000

One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	

Total One-Time Savings		0

Total Net One-Time Costs		100,000

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: LEASED SPACE, MD
 (All values in Dollars)

Category	Cost	Sub-Total
-----	----	-----
Construction		
Military Construction	0	
Family Housing Construction	0	
Information Management Account	0	
Land Purchases	0	
Total - Construction		0
Personnel		
Civilian RIF	0	
Civilian Early Retirement	0	
Civilian New Hires	0	
Eliminated Military PCS	0	
Unemployment	0	
Total - Personnel		0
Overhead		
Program Planning Support	0	
Mothball / Shutdown	0	
Total - Overhead		0
Moving		
Civilian Moving	0	
Civilian PPS	0	
Military Moving	0	
Freight	0	
One-Time Moving Costs	0	
Total - Moving		0
Other		
HAP / RSE	0	
Environmental Mitigation Costs	0	
One-Time Unique Costs	0	
Total - Other		0
-----		0
Total One-Time Costs		0

One-Time Savings		
Military Construction Cost Avoidances	0	
Family Housing Cost Avoidances	0	
Military Moving	0	
Land Sales	0	
One-Time Moving Savings	0	
Environmental Mitigation Savings	0	
One-Time Unique Savings	0	
-----		0
Total One-Time Savings		0

Total Net One-Time Costs		0

TOTAL MILITARY CONSTRUCTION ASSETS (COBRA v5.08) - Page 1/6
 Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95D8OF.SFF

All Costs in \$K

Base Name	Total MilCon	IMA Cost	Land Purch	Cost Aveid	Total Cost
-----	-----	----	-----	-----	-----
NSWC ANNAPOLIS	0	0	0	0	0
NSWC CARDEROCK	8,000	0	0	0	8,000
NSWC PHILADELPHIA	0	0	0	0	0
NRL	0	0	0	0	0
LEASED SPACE	0	0	0	0	0
-----	-----	-----	-----	-----	-----
Totals:	8,000	0	0	0	8,000

MILITARY CONSTRUCTION ASSETS (COBRA v5.08) - Page 2/6
 Date As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

MilCon for Base: NSWC CARDEROCK, MD

All Costs in \$K

Description:	MilCon Categ	Using Rehab	Rehab Cost*	New MilCon	New Cost*	Total Cost*
Materials & Process.	RD&E	0	n/a	10,000	n/a	1,000
MFL & MSF	RD&E	0	n/a	8,400	n/a	7,000

Total Construction Cost:	8,000
+ Info Management Account:	0
+ Land Purchases:	0
- Construction Cost Avoid:	0
TOTAL:	8,000

* All MilCon Costs include Design, Site Preparation, Contingency Planning, and SLOW Costs where applicable.

PERSONNEL SUMMARY REPORT (COBRA v5.08)
 Date As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DOF.SFF

PERSONNEL SUMMARY FOR: NSWC ANNAPOLIS, MD

BASE POPULATION (FY 1996):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
2	0	0	725

FORCE STRUCTURE CHANGES:

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	-307	0	0	0	0	0	-307
TOTAL	-307	0	0	0	0	0	-307

BASE POPULATION (Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
2	0	0	418

PERSONNEL REALIGNMENTS:

To Base: NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

To Base: NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	106	142	18	8	6	0	280
TOTAL	106	142	18	8	6	0	280

TOTAL PERSONNEL REALIGNMENTS (Out of NSWC ANNAPOLIS, MD):

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	116	151	18	8	6	0	299
TOTAL	117	151	18	8	6	0	300

SCENARIO POSITION CHANGES:

	1996	1997	1998	1999	2000	2001	Total
	----	----	----	----	----	----	----
Officers	0	0	-1	0	0	0	-1
Enlisted	0	0	0	0	0	0	0
Civilians	-6	-40	-41	-7	-8	-17	-119
TOTAL	-6	-40	-42	-7	-8	-17	-120

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctra File : C:\COBRA95\NAVY\N95DBOF.SFF

PERSONNEL SUMMARY FOR: NSWC CARDEROCK, MD

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
12	2	0	1,366

PERSONNEL REALIGNMENTS:

From Base: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

TOTAL PERSONNEL REALIGNMENTS (Into NSWC CARDEROCK, MD):

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	1	0	0	0	0	0	1
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	10	9	0	0	0	0	19
TOTAL	11	9	0	0	0	0	20

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
13	2	0	1,385

PERSONNEL SUMMARY FOR: NSWC PHILADELPHIA, PA

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
6	11	0	1,498

PERSONNEL REALIGNMENTS:

From Base: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	106	142	18	8	6	0	280
TOTAL	106	142	18	8	6	0	280

TOTAL PERSONNEL REALIGNMENTS (Into NSWC PHILADELPHIA, PA):

	1996	1997	1998	1999	2000	2001	Total
-----	-----	-----	-----	-----	-----	-----	-----
Officers	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Students	0	0	0	0	0	0	0
Civilians	106	142	18	8	6	0	280
TOTAL	106	142	18	8	6	0	280

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
6	11	0	1,778

PERSONNEL SUMMARY REPORT (COBRA v5.08) - Page 3
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

PERSONNEL SUMMARY FOR: NRL, DC

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
371	285	0	3,201

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
371	285	0	3,201

PERSONNEL SUMMARY FOR: LEASED SPACE, MD

BASE POPULATION (FY 1996, Prior to BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

BASE POPULATION (After BRAC Action):

Officers	Enlisted	Students	Civilians
-----	-----	-----	-----
0	0	0	0

TOTAL PERSONNEL IMPACT REPORT (COBRA v5.08) - Page 1/6
Date As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\W95DBOF.SFF

	Rate	1996	1997	1998	1999	2000	2001	Total
		----	----	----	----	----	----	-----
CIVILIAN POSITIONS REALIGNING OUT		116	151	18	8	6	0	299
Early Retirement*	10.00%	11	14	2	1	1	0	29
Regular Retirement*	5.00%	5	7	1	0	0	0	13
Civilian Turnover*	15.00%	16	21	3	1	1	0	42
Civs Not Moving (RIFs)**		6	9	1	0	0	0	16
Civilians Moving (the remainder)		78	100	11	6	4	0	199
Civilian Positions Available		38	51	7	2	2	0	100
CIVILIAN POSITIONS ELIMINATED		6	40	41	7	8	17	119
Early Retirement	10.00%	1	4	4	1	1	2	13
Regular Retirement	5.00%	0	2	2	0	0	1	5
Civilian Turnover	15.00%	1	6	6	1	1	3	18
Civs Not Moving (RIFs)**		0	2	2	0	0	1	5
Priority Placement#	60.00%	4	24	25	4	5	10	72
Civilians Available to Move		0	2	2	1	1	0	6
Civilians Moving		0	2	2	1	1	0	6
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		116	151	18	8	6	0	299
Civilians Moving		78	102	13	7	5	0	205
New Civilians Hired		38	49	5	1	1	0	94
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIRMENTS		12	18	6	2	2	2	42
TOTAL CIVILIAN RIFS		6	11	3	0	0	1	21
TOTAL CIVILIAN PRIORITY PLACEMENTS#		4	24	25	4	5	10	72
TOTAL CIVILIAN NEW HIRES		38	49	5	1	1	0	94

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

+ The Percentage of Civilians Not Willing to Move (Voluntary RIFs) varies from base to base.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

PERSONNEL IMPACT REPORT (COBRA v5.08) - Page 2/6
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD	Rate	1996	1997	1998	1999	2000	2001	Total
		----	----	----	----	----	----	----
CIVILIAN POSITIONS REALIGNING OUT		116	151	18	8	6	0	299
Early Retirement*	10.00%	11	14	2	1	1	0	29
Regular Retirement*	5.00%	5	7	1	0	0	0	13
Civilian Turnover*	15.00%	16	21	3	1	1	0	42
Civs Not Moving (RIFs)*	6.00%	6	9	1	0	0	0	16
Civilians Moving (the remainder)		78	100	11	6	4	0	199
Civilian Positions Available		38	51	7	2	2	0	100
CIVILIAN POSITIONS ELIMINATED		6	40	41	7	8	17	119
Early Retirement	10.00%	1	4	4	1	1	2	13
Regular Retirement	5.00%	0	2	2	0	0	1	5
Civilian Turnover	15.00%	1	6	6	1	1	3	18
Civs Not Moving (RIFs)*	6.00%	0	2	2	0	0	1	5
Priority Placements#	60.00%	4	24	25	4	5	10	72
Civilians Available to Move		0	2	2	1	1	0	6
Civilians Moving		0	2	2	1	1	0	6
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIREMENTS		12	18	6	2	2	2	42
TOTAL CIVILIAN RIFs		6	11	3	0	0	1	21
TOTAL CIVILIAN PRIORITY PLACEMENTS#		4	24	25	4	5	10	72
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC CARDEROCK, MD	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placements#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		10	9	0	0	0	0	19
Civilians Moving		10	9	0	0	0	0	19
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIREMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFs		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placements#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		106	142	18	8	6	0	280
Civilians Moving		68	93	13	7	5	0	186
New Civilians Hired		38	49	5	1	1	0	94
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIREMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFs		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		38	49	5	1	1	0	94

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NRL, DC	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	6.00%	0	0	0	0	0	0	0
Priority Placement#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIREMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFs		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: LEASED SPACE, MD	Rate	1996	1997	1998	1999	2000	2001	Total
CIVILIAN POSITIONS REALIGNING OUT		0	0	0	0	0	0	0
Early Retirement*	10.00%	0	0	0	0	0	0	0
Regular Retirement*	5.00%	0	0	0	0	0	0	0
Civilian Turnover*	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	0.00%	0	0	0	0	0	0	0
Civilians Moving (the remainder)		0	0	0	0	0	0	0
Civilian Positions Available		0	0	0	0	0	0	0
CIVILIAN POSITIONS ELIMINATED		0	0	0	0	0	0	0
Early Retirement	10.00%	0	0	0	0	0	0	0
Regular Retirement	5.00%	0	0	0	0	0	0	0
Civilian Turnover	15.00%	0	0	0	0	0	0	0
Civs Not Moving (RIFs)*	0.00%	0	0	0	0	0	0	0
Priority Placements#	60.00%	0	0	0	0	0	0	0
Civilians Available to Move		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
Civilian RIFs (the remainder)		0	0	0	0	0	0	0
CIVILIAN POSITIONS REALIGNING IN		0	0	0	0	0	0	0
Civilians Moving		0	0	0	0	0	0	0
New Civilians Hired		0	0	0	0	0	0	0
Other Civilian Additions		0	0	0	0	0	0	0
TOTAL CIVILIAN EARLY RETIREMENTS		0	0	0	0	0	0	0
TOTAL CIVILIAN RIFS		0	0	0	0	0	0	0
TOTAL CIVILIAN PRIORITY PLACEMENTS#		0	0	0	0	0	0	0
TOTAL CIVILIAN NEW HIRES		0	0	0	0	0	0	0

* Early Retirements, Regular Retirements, Civilian Turnover, and Civilians Not Willing to Move are not applicable for moves under fifty miles.

Not all Priority Placements involve a Permanent Change of Station. The rate of PPS placements involving a PCS is 50.00%

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 1/18
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

ONE-TIME COSTS -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	8,000	0	0	0	0	0	8,000
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIF	128	235	64	0	0	21	448
Civ Retire	59	89	29	10	10	10	207
CIV MOVING							
Per Diem	254	347	48	26	19	0	694
POV Miles	1	2	0	0	0	0	4
Home Purch	773	1,057	148	79	57	0	2,114
MHG	434	593	83	45	32	0	1,186
Misc	47	65	9	5	3	0	130
House Hunt	153	209	29	16	11	0	419
PPS	58	345	374	58	86	144	1,066
RITA	344	471	66	35	25	0	941
FREIGHT							
Packing	20	25	3	2	1	0	51
Freight	85	309	97	0	0	0	491
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	19	34	9	0	0	3	66
OTHER							
Program Plan	744	558	419	314	235	177	2,448
Shutdown	230	357	112	28	26	32	786
New Hire	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
MHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	4	0	0	0	4
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	125	0	0	0	0	0	125
Info Manage	0	0	0	0	0	0	0
1-Time Other	9,662	11,723	9,003	2,000	2,000	2,000	36,388
TOTAL ONE-TIME	21,137	16,421	10,499	2,618	2,507	2,387	55,569

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 2/18
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

RECURRINGCOSTS -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	30	30	30	30	121	30
BOS	712	1,580	1,676	1,719	1,751	1,751	9,189	1,751
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	13	13	13	13	13	13	81	13
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	725	2,114	2,241	2,284	2,316	2,316	11,997	2,316
TOTAL COST	21,862	18,536	12,740	4,902	4,823	4,702	67,566	2,316
ONE-TIME SAVES -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRINGSAVES -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	376	1,358	2,184	2,447	2,552	2,671	11,588	2,744
BOS	27	819	2,243	2,542	2,783	3,516	11,930	3,516
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	164	1,422	3,637	4,950	5,360	6,044	21,577	6,508
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	38	77	77	77	269	77
Enl Salary	0	0	0	0	0	0	0	0
House Allow	12	12	12	12	12	12	71	12
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	579	3,611	8,115	10,027	10,784	12,319	45,435	12,857
TOTAL SAVINGS	579	3,611	8,115	10,027	10,784	12,319	45,435	12,857

TOTAL APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 3/18
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

ONE-TIME NET -----(\$K)-----	1996 -----	1997 -----	1998 -----	1999 -----	2000 -----	2001 -----	Total -----	
CONSTRUCTION								
MILCON	8,000	0	0	0	0	0	8,000	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	187	323	93	10	10	31	655	
Civ Moving	2,169	3,425	858	266	235	144	7,097	
Other	993	950	540	342	262	212	3,300	
MIL PERSONNEL								
Mil Moving	0	0	4	0	0	0	4	
OTHER								
NAP / RSE	0	0	0	0	0	0	0	
Environmental	125	0	0	0	0	0	125	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	9,662	11,723	9,003	2,000	2,000	2,000	36,388	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	21,137	16,421	10,499	2,618	2,507	2,387	55,569	
RECURRING NET -----(\$K)-----	1996 -----	1997 -----	1998 -----	1999 -----	2000 -----	2001 -----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	-376	-1,358	-2,154	-2,416	-2,522	-2,641	-11,467	-2,714
BOS	685	761	-567	-823	-1,032	-1,765	-2,741	-1,765
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	-164	-1,422	-3,637	-4,950	-5,360	-6,044	-21,577	-6,508
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	-38	-77	-77	-77	-269	-77
House Allow	2	2	2	2	2	2	10	2
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	147	-1,497	-5,873	-7,743	-8,469	-10,003	-33,439	-10,541
TOTAL NET COST	21,283	14,925	4,626	-5,125	-5,962	-7,617	22,130	-10,541

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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N950BOF.SFF

Base: NSWC ANNAPOLIS, MD

ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	128	235	64	0	0	21	448
Civ Retire	59	89	29	10	10	10	207
CIV MOVING							
Per Diem	254	347	48	26	19	0	694
POV Miles	1	2	0	0	0	0	4
Home Purch	773	1,057	148	79	57	0	2,114
HHG	434	593	83	45	32	0	1,186
Misc	47	65	9	5	3	0	130
House Mnt	153	209	29	16	11	0	419
PPS	58	345	374	58	86	144	1,066
RITA	344	471	66	35	25	0	941
FREIGHT							
Packing	20	25	3	2	1	0	51
Freight	85	309	97	0	0	0	491
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	19	34	9	0	0	3	66
OTHER							
Program Plan	744	558	419	314	235	177	2,448
Shutdown	230	357	112	28	26	32	786
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
HHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	4	0	0	0	4
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	6,015	9,000	9,000	2,000	2,000	2,000	30,015
TOTAL ONE-TIME	9,365	13,698	10,496	2,618	2,507	2,387	41,071

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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC ANNAPOLIS, MD								
RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
 TOTAL COSTS	 9,365	 13,698	 10,496	 2,618	 2,507	 2,387	 41,071	 0
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
 RECURRINGSAVES	 1996	 1997	 1998	 1999	 2000	 2001	 Total	 Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	376	1,358	2,184	2,447	2,552	2,671	11,588	2,744
BOS	27	819	2,243	2,542	2,783	3,516	11,930	3,516
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	164	1,422	3,637	4,950	5,360	6,044	21,577	6,508
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	38	77	77	77	269	77
Enl Salary	0	0	0	0	0	0	0	0
House Allow	12	12	12	12	12	12	71	12
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	579	3,611	8,115	10,027	10,784	12,319	45,435	12,857
 TOTAL SAVINGS	 579	 3,611	 8,115	 10,027	 10,784	 12,319	 45,435	 12,857

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 7/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC CARDEROCK, MD

ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	8,000	0	0	0	0	0	8,000
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
NHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
NHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	125	0	0	0	0	0	125
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	2,400	0	0	0	0	2,400
TOTAL ONE-TIME	8,125	2,400	0	0	0	0	10,525

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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC CARDEROCK, MD								
RECURRINGCOSTS	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPHA	0	0	30	30	30	30	121	30
BOS	112	203	203	203	203	203	1,126	203
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	13	13	13	13	13	13	81	13
OTHER								
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	112	203	233	233	233	233	1,328	247
TOTAL COSTS	8,250	2,616	247	247	247	247	11,853	247
ONE-TIME SAVES	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCOM	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
1-Time Move	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
Land Sales	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
1-Time Other	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	0	0	0	0	0	0	
RECURRINGSAVES	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPHA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Off Salary	0	0	0	0	0	0	0	0
Enl Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL SAVINGS	0	0	0	0	0	0	0	0

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 9/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DOF.SFF

Base: NSWC CARDEROCK, MD

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	8,000	0	0	0	0	0	8,000	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	125	0	0	0	0	0	125	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	2,400	0	0	0	0	2,400	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	8,125	2,400	0	0	0	0	10,525	
RECURRING NET	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	30	30	30	30	121	30
BOS	112	203	203	203	203	203	1,126	203
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	13	13	13	13	13	13	81	13
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	125	216	247	247	247	247	1,328	247
TOTAL NET COST	8,250	2,616	247	247	247	247	11,853	247

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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA

ONE-TIME COSTS	1996	1997	1998	1999	2000	2001	Total
-----(\$K)-----	----	----	----	----	----	----	-----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
NHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Mnt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
NHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	3,647	223	3	0	0	0	3,873
TOTAL ONE-TIME	3,647	223	3	0	0	0	3,873

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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NSWC PHILADELPHIA, PA

ONE-TIME NET	1996	1997	1998	1999	2000	2001	Total	
-----(\$K)-----	----	----	----	----	----	----	-----	
CONSTRUCTION								
MILCON	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	3,647	223	3	0	0	0	3,873	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	3,647	223	3	0	0	0	3,873	
RECURRING NET	1996	1997	1998	1999	2000	2001	Total	Beyond
-----(\$K)-----	----	----	----	----	----	----	-----	-----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPHA	0	0	0	0	0	0	0	0
BOS	600	1,377	1,473	1,516	1,548	1,548	8,063	1,548
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	521	521	521	521	521	2,605	521
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	600	1,898	1,994	2,037	2,069	2,069	10,668	2,069
TOTAL NET COST	4,247	2,121	1,997	2,037	2,069	2,069	14,541	2,069

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 13/18
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Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NRL, DC	1996	1997	1998	1999	2000	2001	Total
ONE-TIME COSTS	----	----	----	----	----	----	-----
-----(\$K)-----							
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
MHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Munt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
MHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
MAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	100	0	0	0	0	100
TOTAL ONE-TIME	0	100	0	0	0	0	100

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 15/18
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: NRL, DC

ONE-TIME NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	
CONSTRUCTION								
MILCOM	0	0	0	0	0	0	0	
Fam Housing	0	0	0	0	0	0	0	
O&M								
Civ Retir/RIF	0	0	0	0	0	0	0	
Civ Moving	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	
MIL PERSONNEL								
Mil Moving	0	0	0	0	0	0	0	
OTHER								
HAP / RSE	0	0	0	0	0	0	0	
Environmental	0	0	0	0	0	0	0	
Info Manage	0	0	0	0	0	0	0	
1-Time Other	0	100	0	0	0	0	100	
Land	0	0	0	0	0	0	0	
TOTAL ONE-TIME	0	100	0	0	0	0	100	
RECURRING NET -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----	Beyond -----
FAM HOUSE OPS	0	0	0	0	0	0	0	0
O&M								
RPMA	0	0	0	0	0	0	0	0
BOS	0	0	0	0	0	0	0	0
Unique Operat	0	0	0	0	0	0	0	0
Caretaker	0	0	0	0	0	0	0	0
Civ Salary	0	0	0	0	0	0	0	0
CHAMPUS	0	0	0	0	0	0	0	0
MIL PERSONNEL								
Mil Salary	0	0	0	0	0	0	0	0
House Allow	0	0	0	0	0	0	0	0
OTHER								
Procurement	0	0	0	0	0	0	0	0
Mission	0	0	0	0	0	0	0	0
Misc Recur	0	0	0	0	0	0	0	0
Unique Other	0	0	0	0	0	0	0	0
TOTAL RECUR	0	0	0	0	0	0	0	0
TOTAL NET COST	0	100	0	0	0	0	100	0

APPROPRIATIONS DETAIL REPORT (COBRA v5.08) - Page 16/18
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base: LEASED SPACE, MD

ONE-TIME COSTS -----(\$K)-----	1996 ----	1997 ----	1998 ----	1999 ----	2000 ----	2001 ----	Total -----
CONSTRUCTION							
MILCON	0	0	0	0	0	0	0
Fam Housing	0	0	0	0	0	0	0
Land Purch	0	0	0	0	0	0	0
O&M							
CIV SALARY							
Civ RIFs	0	0	0	0	0	0	0
Civ Retire	0	0	0	0	0	0	0
CIV MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
Home Purch	0	0	0	0	0	0	0
MHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
House Hunt	0	0	0	0	0	0	0
PPS	0	0	0	0	0	0	0
RITA	0	0	0	0	0	0	0
FREIGHT							
Packing	0	0	0	0	0	0	0
Freight	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Unemployment	0	0	0	0	0	0	0
OTHER							
Program Plan	0	0	0	0	0	0	0
Shutdown	0	0	0	0	0	0	0
New Hires	0	0	0	0	0	0	0
1-Time Move	0	0	0	0	0	0	0
MIL PERSONNEL							
MIL MOVING							
Per Diem	0	0	0	0	0	0	0
POV Miles	0	0	0	0	0	0	0
MHG	0	0	0	0	0	0	0
Misc	0	0	0	0	0	0	0
OTHER							
Elim PCS	0	0	0	0	0	0	0
OTHER							
HAP / RSE	0	0	0	0	0	0	0
Environmental	0	0	0	0	0	0	0
Info Manage	0	0	0	0	0	0	0
1-Time Other	0	0	0	0	0	0	0
TOTAL ONE-TIME	0	0	0	0	0	0	0

PERSONNEL, \$F, RPMA, AND BOS DELTAS (COBRA v5.08)
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Base	Personnel		\$F		
	Change	%Change	Change	%Change	Chg/Per
NSWC ANNAPOLIS	-420	-100%	-629,000	-100%	1,498
NSWC CARDEROCK	20	1%	18,400	1%	920
NSWC PHILADELPHIA	280	18%	0	0%	0
NRL	0	0%	0	0%	0
LEASED SPACE	0	0%	0	0%	0

Base	RPMA(\$)			BOS(\$)		
	Change	%Change	Chg/Per	Change	%Change	Chg/Per
NSWC ANNAPOLIS	-2,744,000	-100%	6,533	-3,515,983	-100%	8,371
NSWC CARDEROCK	30,382	1%	1,519	202,797	1%	10,140
NSWC PHILADELPHIA	0	0%	0	1,548,157	10%	5,529
NRL	0	0%	0	0	0%	0
LEASED SPACE	0	0%	0	0	0%	0

Base	RPMABOS(\$)		
	Change	%Change	Chg/Per
NSWC ANNAPOLIS	-6,259,983	-123%	14,905
NSWC CARDEROCK	233,179	1%	11,659
NSWC PHILADELPHIA	1,548,157	8%	5,529
NRL	0	0%	0
LEASED SPACE	0	0%	0

RPMA/BOS CHANGE REPORT (COBRA v5.08)
 Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

Net Change(\$K)	1996	1997	1998	1999	2000	2001	Total	Beyond
RPMA Change	-376	-1,358	-2,154	-2,416	-2,522	-2,641	-11,467	-2,714
BOS Change	685	761	-567	-823	-1,032	-1,765	-2,741	-1,765
Housing Change	0	0	0	0	0	0	0	0
TOTAL CHANGES	309	-597	-2,721	-3,239	-3,554	-4,406	-14,208	-4,479

INPUT DATA REPORT (COBRA v5.08)
Data As Of 16:45 06/20/1995, Report Created 18:49 06/20/1995

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95D8OF.SFF

INPUT SCREEN ONE - GENERAL SCENARIO INFORMATION

Model Year One : FY 1996

Model does Time-Phasing of Construction/Shutdown: Yes

Base Name	Strategy:
-----	-----
NSWC ANNAPOLIS, MD	Closes in FY 2001
NSWC CARDEROCK, MD	Realignment
NSWC PHILADELPHIA, PA	Realignment
NRL, DC	Realignment
LEASED SPACE, MD	Realignment

Summary:

CLOSE NSWC Det ANNAPOLIS, INCLUDING SPECIAL AREA (NIKE SITE). CONSOLIDATE AT NSWC PHILADELPHIA. RELOCATE SELECTED FACILITIES TO APPROPRIATE SITES.

THIS IS A COMMISSION MODIFIED COBRA TO CORRECT BOS NON-PAYROLL COSTS FOR NSWC ANNAPOLIS AND NSWC PHILADELPHIA. CHANGES RPMA & BOS NON-PAYROLL TO MATCH DON REVISED SUBMISSION. CHANGES NUMBER OF PERS ELIMINATED AND REALIGNED.

INPUT SCREEN TWO - DISTANCE TABLE

From Base:	To Base:	Distance:
-----	-----	-----
NSWC ANNAPOLIS, MD	NSWC CARDEROCK, MD	41 mi
NSWC ANNAPOLIS, MD	NSWC PHILADELPHIA, PA	123 mi
NSWC ANNAPOLIS, MD	NRL, DC	34 mi
NSWC ANNAPOLIS, MD	LEASED SPACE, MD	5 mi

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from NSWC ANNAPOLIS, MD to NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	1	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	10	9	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	90	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Transfers from NSWC ANNAPOLIS, MD to NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	106	142	18	8	6	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	290	910	330	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

INPUT SCREEN THREE - MOVEMENT TABLE

Transfers from NSWC ANNAPOLIS, MD to NRL, DC

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	49	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

Transfers from NSWC ANNAPOLIS, MD to LEASED SPACE, MD

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Officer Positions:	0	0	0	0	0	0
Enlisted Positions:	0	0	0	0	0	0
Civilian Positions:	0	0	0	0	0	0
Student Positions:	0	0	0	0	0	0
Missn Eqpt (tons):	0	10	0	0	0	0
Suppt Eqpt (tons):	0	0	0	0	0	0
Military Light Vehicles:	0	0	0	0	0	0
Heavy/Special Vehicles:	0	0	0	0	0	0

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: NSWC ANNAPOLIS, MD

Total Officer Employees:	2	RPMA Non-Payroll (\$K/Year):	2,744
Total Enlisted Employees:	0	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	6,086
Total Civilian Employees:	725	BOS Payroll (\$K/Year):	6,799
Mil Families Living On Base:	18.0%	Family Housing (\$K/Year):	2
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	0.96
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	629	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	328	Activity Code:	61533
Enlisted VHA (\$/Month):	291		
Per Diem Rate (\$/Day):	110	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Name: NSWC CARDEROCK, MD

Total Officer Employees:	12	RPMA Non-Payroll (\$K/Year):	3,861
Total Enlisted Employees:	2	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	25,999
Total Civilian Employees:	1,366	BOS Payroll (\$K/Year):	27,595
Mil Families Living On Base:	0.0%	Family Housing (\$K/Year):	0
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.03
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	2,174	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	462	Activity Code:	00167
Enlisted VHA (\$/Month):	316		
Per Diem Rate (\$/Day):	151	Homeowner Assistance Program:	No
Freight Cost (\$/Ton/Mile):	0.07	Unique Activity Information:	No

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

INPUT SCREEN FOUR - STATIC BASE INFORMATION

Name: NSWC PHILADELPHIA, PA

Total Officer Employees:	6	RPMA Non-Payroll (\$K/Year):	3,537
Total Enlisted Employees:	11	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	16,143
Total Civilian Employees:	1,498	BOS Payroll (\$K/Year):	16,132
Mil Families Living On Base:	25.0%	Family Housing (\$K/Year):	2
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.18
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	949	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	281	Activity Code:	65540
Enlisted VHA (\$/Month):	170	Homeowner Assistance Program:	No
Per Diem Rate (\$/Day):	123	Unique Activity Information:	No
Freight Cost (\$/Ton/Mile):	0.07		

Name: NRL, DC

Total Officer Employees:	371	RPMA Non-Payroll (\$K/Year):	30,666
Total Enlisted Employees:	285	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	45,444
Total Civilian Employees:	3,201	BOS Payroll (\$K/Year):	39,628
Mil Families Living On Base:	11.0%	Family Housing (\$K/Year):	4
Civilians Not Willing To Move:	6.0%	Area Cost Factor:	1.03
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	3,400	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	462	Activity Code:	00173
Enlisted VHA (\$/Month):	316	Homeowner Assistance Program:	No
Per Diem Rate (\$/Day):	151	Unique Activity Information:	No
Freight Cost (\$/Ton/Mile):	0.07		

Name: LEASED SPACE, MD

Total Officer Employees:	0	RPMA Non-Payroll (\$K/Year):	0
Total Enlisted Employees:	0	Communications (\$K/Year):	0
Total Student Employees:	0	BOS Non-Payroll (\$K/Year):	0
Total Civilian Employees:	0	BOS Payroll (\$K/Year):	0
Mil Families Living On Base:	0.0%	Family Housing (\$K/Year):	0
Civilians Not Willing To Move:	0.0%	Area Cost Factor:	0.96
Officer Housing Units Avail:	0	CHAMPUS In-Pat (\$/Visit):	0
Enlisted Housing Units Avail:	0	CHAMPUS Out-Pat (\$/Visit):	0
Total Base Facilities(KSF):	0	CHAMPUS Shift to Medicare:	0.0%
Officer VHA (\$/Month):	328	Activity Code:	LOCLMD
Enlisted VHA (\$/Month):	291	Homeowner Assistance Program:	No
Per Diem Rate (\$/Day):	110	Unique Activity Information:	No
Freight Cost (\$/Ton/Mile):	0.07		

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	6,015	9,000	9,000	2,000	2,000	2,000
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	629	Perc Family Housing ShutDown:				0.0%

Name: NSWC CARDEROCK, MD

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	0	2,400	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	125	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Name: NSWC PHILADELPHIA, PA

	1996	1997	1998	1999	2000	2001
1-Time Unique Cost (\$K):	3,647	223	3	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	521	521	521	521	521
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Department : NAVY
 Option Package : NSWC ANNAPOLIS Alt 4
 Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
 Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

INPUT SCREEN FIVE - DYNAMIC BASE INFORMATION

Name: NRL, DC

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	100	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqcd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

Name: LEASED SPACE, MD

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
1-Time Unique Cost (\$K):	0	0	0	0	0	0
1-Time Unique Save (\$K):	0	0	0	0	0	0
1-Time Moving Cost (\$K):	0	0	0	0	0	0
1-Time Moving Save (\$K):	0	0	0	0	0	0
Env Non-MilCon Reqcd(\$K):	0	0	0	0	0	0
Activ Mission Cost (\$K):	0	0	0	0	0	0
Activ Mission Save (\$K):	0	0	0	0	0	0
Misc Recurring Cost(\$K):	0	0	0	0	0	0
Misc Recurring Save(\$K):	0	0	0	0	0	0
Land (+Buy/-Sales) (\$K):	0	0	0	0	0	0
Construction Schedule(%):	0%	0%	0%	0%	0%	0%
Shutdown Schedule (%):	0%	0%	0%	0%	0%	0%
MilCon Cost Avoidnc(\$K):	0	0	0	0	0	0
Fam Housing Avoidnc(\$K):	0	0	0	0	0	0
Procurement Avoidnc(\$K):	0	0	0	0	0	0
CHAMPUS In-Patients/Yr:	0	0	0	0	0	0
CHAMPUS Out-Patients/Yr:	0	0	0	0	0	0
Facil ShutDown(KSF):	0	Perc Family Housing ShutDown:				0.0%

INPUT SCREEN SIX - BASE PERSONNEL INFORMATION

Name: NSWC ANNAPOLIS, MD

	1996	1997	1998	1999	2000	2001
	----	----	----	----	----	----
Off Force Struc Change:	0	0	0	0	0	0
Enl Force Struc Change:	0	0	0	0	0	0
Civ Force Struc Change:	-307	0	0	0	0	0
Stu Force Struc Change:	0	0	0	0	0	0
Off Scenario Change:	0	0	-1	0	0	0
Enl Scenario Change:	0	0	0	0	0	0
Civ Scenario Change:	-6	-40	-41	-7	-8	-17
Off Change(No Sal Save):	0	0	0	0	0	0
Enl Change(No Sal Save):	0	0	0	0	0	0
Civ Change(No Sal Save):	0	0	0	0	0	0
Caretakers - Military:	0	0	0	0	0	0
Caretakers - Civilian:	0	0	0	0	0	0

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\N95DBOF.SFF

INPUT SCREEN SEVEN - BASE MILITARY CONSTRUCTION INFORMATION

Name: NSWC CARDEROCK, MD

Description	Categ	New MilCon	Rehab MilCon	Total Cost(\$K)
Materials & Process.	BDT&E	10,000	0	1,000
MFL & MSF	BDT&E	8,400	0	7,000

STANDARD FACTORS SCREEN ONE - PERSONNEL

Percent Officers Married:	71.70%	Civ Early Retire Pay Factor:	9.00%
Percent Enlisted Married:	60.10%	Priority Placement Service:	60.00%
Enlisted Housing MilCons:	98.00%	PPS Actions Involving PCS:	50.00%
Officer Salary(\$/Year):	76,781.00	Civilian PCS Costs (\$):	28,800.00
Off BAQ with Dependents(\$):	7,925.00	Civilian New Hire Cost(\$):	0.00
Enlisted Salary(\$/Year):	33,178.00	Nat Median Home Price(\$):	114,600.00
Enl BAQ with Dependents(\$):	5,251.00	Home Sale Reimburse Rate:	10.00%
Avg Unemploy Cost(\$/Week):	174.00	Max Home Sale Reimburs(\$):	22,385.00
Unemployment Eligibility(Weeks):	18	Home Purch Reimburse Rate:	5.00%
Civilian Salary(\$/Year):	54,694.00	Max Home Purch Reimburs(\$):	11,191.00
Civilian Turnover Rate:	15.00%	Civilian Homeowning Rate:	64.00%
Civilian Early Retire Rate:	10.00%	HAP Home Value Reimburse Rate:	22.90%
Civilian Regular Retire Rate:	5.00%	HAP Homeowner Receiving Rate:	5.00%
Civilian RIF Pay Factor:	39.00%	RSE Home Value Reimburse Rate:	0.00%
SF File Desc:	NAVY DBOF BRAC95	RSE Homeowner Receiving Rate:	0.00%

STANDARD FACTORS SCREEN TWO - FACILITIES

RPMA Building SF Cost Index:	0.93	Rehab vs. New MilCon Cost:	75.00%
BOS Index (RPMA vs population):	0.54	Info Management Account:	0.00%
(Indices are used as exponents)		MilCon Design Rate:	9.00%
Program Management Factor:	10.00%	MilCon SLOW Rate:	6.00%
Caretaker Admin(SF/Care):	162.00	MilCon Contingency Plan Rate:	5.00%
Mothball Cost (\$/SF):	1.25	MilCon Site Preparation Rate:	39.00%
Avg Bachelor Quarters(SF):	294.00	Discount Rate for NPV.RPT/ROI:	2.75%
Avg Family Quarters(SF):	1.00	Inflation Rate for NPV.RPT/ROI:	0.00%
APPDET.RPT Inflation Rates:			
1996: 0.00% 1997: 2.90% 1998: 3.00%		1999: 3.00% 2000: 3.00% 2001: 3.00%	

STANDARD FACTORS SCREEN THREE - TRANSPORTATION

Material/Assigned Person(Lb):	710	Equip Pack & Crate(\$/Ton):	284.00
NHG Per Off Family (Lb):	14,500.00	Mil Light Vehicle(\$/Mile):	0.31
NHG Per Enl Family (Lb):	9,000.00	Heavy/Spec Vehicle(\$/Mile):	3.38
NHG Per Mil Single (Lb):	6,400.00	POV Reimbursement(\$/Mile):	0.18
NHG Per Civilian (Lb):	18,000.00	Avg Mil Tour Length (Years):	4.17
Total NHG Cost (\$/100Lb):	35.00	Routine PCS(\$/Pers/Tour):	3,763.00
Air Transport (\$/Pass Mile):	0.20	One-Time Off PCS Cost(\$):	4,527.00
Misc Exp (\$/Direct Employ):	700.00	One-Time Enl PCS Cost(\$):	1,403.00

Department : NAVY
Option Package : NSWC ANNAPOLIS Alt 4
Scenario File : C:\COBRA95\NAVY\DBCRC\NSWCA1R4.CBR
Std Fctrs File : C:\COBRA95\NAVY\W95DROF.SFF

STANDARD FACTORS SCREEN FOUR - MILITARY CONSTRUCTION

Category	UM	\$/UM	Category	UM	\$/UM
-----	--	----	-----	--	----
Horizontal	(SY)	61	Optional Category A	()	0
Waterfront	(LF)	10,350	Optional Category B	()	0
Air Operations	(SF)	122	Optional Category C	()	0
Operational	(SF)	111	Optional Category D	()	0
Administrative	(SF)	123	Optional Category E	()	0
School Buildings	(SF)	108	Optional Category F	()	0
Maintenance Shops	(SF)	102	Optional Category G	()	0
Bachelor Quarters	(SF)	96	Optional Category H	()	0
Family Quarters	(EA)	78,750	Optional Category I	()	0
Covered Storage	(SF)	94	Optional Category J	()	0
Dining Facilities	(SF)	165	Optional Category K	()	0
Recreation Facilities	(SF)	120	Optional Category L	()	0
Communications Facil	(SF)	165	Optional Category M	()	0
Shipyard Maintenance	(SF)	129	Optional Category N	()	0
RDT & E Facilities	(SF)	160	Optional Category O	()	0
POL Storage	(BL)	12	Optional Category P	()	0
Ammunition Storage	(SF)	160	Optional Category Q	()	0
Medical Facilities	(SF)	168	Optional Category R	()	0
Environmental	()	0			

EXPLANATORY NOTES (INPUT SCREEN NINE)

1. Changed BOS Non-Payroll for NSWC Annapolis to \$6,086K.
2. Changed RPMA Non-Payroll for NSWC Philadelphia to \$2,707K; BOS Non-Payroll to \$12,583; and BOS Payroll to \$16,132K.
3. Changed NSWC Phil RPMA Non-payroll to \$3,537K.
4. Changed NSWC Phil BOS Non-payroll to \$16,143K.
5. Changed number of pers eliminated from 139 to 120.
6. Changed number of pers realigned from 281 to 300.
7. Adds \$30M in 1-Time Unique Cost at NSWC Annapolis to move equipment.

Document Separator

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis.
 - Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing.
 - Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC.
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

CRITERIA	REVISED DOD RECOMMENDATION
MILITARY VALUE	8 of 13
FORCE STRUCTURE	N/A
ONE-TIME COSTS (\$ M)	24.6
ANNUAL SAVINGS (\$ M)	11.7
RETURN ON INVESTMENT	2000 (2 years)
NET PRESENT VALUE (\$ M)	135.3
BASE OPERATING BUDGET (\$ M)	15.6
PERSONNEL ELIMINATED (MIL / CIV)	1/138
PERSONNEL REALIGNED (MIL / CIV)	1/280
ECONOMIC IMPACT (BRAC 95 / CUM)	- 0.0 % / - 0.6 %
ENVIRONMENTAL	No Significant Issues

H-13

ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Impact of loss of Deep Pressure Tank and Fluid Dynamics Facility	Facilities can be abandoned after 2001 (earlier position was 1998)	Facilities needed by Navy after closure	Navy says that facilities can be abandoned after 2001. Unable to accurately predict cost of conducting tests through alternative means
Is work performed by government employees in preparation for a move a cost of the move?	Not a COBRA cost	Costs must be recognized	Costs have been reflected because billets could be eliminated more rapidly
Joint Spectrum Center (NSWC tenant)	Cost of additional operating costs offsets savings from not paying rent.	Savings can be achieved by keeping tenant and host on Government property.	Moving and occupying Government-Owned space, with contractor off-site in leased space would generate similar savings
Does Navy need to retain refrigeration R & D capability?	Annapolis personnel not required	Refrigeration R & D will be needed even after chlorofluorocarbon (CFC) project is completed	Revised COBRA realigns staff
COBRA treatment of moving costs	COBRA is correct	DoD understated moving costs	Revised COBRA reasonably reflects moving costs

H-14

ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

(Continued)

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Costs of running base until 2001	COBRA needs no revision	Costs of running base until 2001 are not reflected in cost analysis	Revised COBRA reasonably reflects adjusted base operating costs
Base is surrounded by Naval Station Annapolis and Severn River	No position	Navy will not be able to dispose of its property	Disposal problems do not significantly affect projected savings
COBRA excursion reflects keeping base open, and maintenance of CFC and Fluid Dynamics Facility, retention of refrigeration R & D personnel, and addition of moving costs	Costs and personnel changes not required	Moving costs still understated; MILCON understated; savings could be recognized by keeping Joint Spectrum Center on NSWC compound and moving its contractor onto compound; additional overhead personnel are needed during final years;	NPV \$81.2 M 1-time costs \$55.6 M ROI 3 years Recurring savings: \$10.5 M

H-15

Document Separator

DRAFT

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

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PERSONNEL ELIMINATED (MIL / CIV)	1/138
PERSONNEL REALIGNED (MIL / CIV)	1/280
ECONOMIC IMPACT (BRAC 95 / CUM)	- 0.0 % / - 0.6 %
ENVIRONMENTAL	No Significant Issues

ISSUES REVIEWED

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

- | | |
|---|--|
| <ul style="list-style-type: none">• Can Navy afford to lose two major facilities slated for abandonment (Deep Pressure Tank and Fluid Dynamics Facility)?• Cost of testing alternatives in absence of Deep Pressure and Fluid Dynamics Facility• Is downtime associated with movement of other facilities from Annapolis to Philadelphia acceptable in terms of impact on major programs (particularly CFC replacement)?• Since Civil Servants are already on the Navy payroll, can they be directed to move equipment instead of performing research and there is no cost for that work?• Financial implications of enabling tenant to remain on base• Financial implications of enabling tenant's contractor to move on base, assuming that base remains open• Are other costs associated with the proposed move correct?• No base is closed• Synergy with Naval Academy• Incorrect BOS and RPMA costs in COBRA• Water and fuel dispensing/service provided to USNA• Industrial Base issues• MILCON at Philadelphia• Were costs of contractor support for move improperly excluded?• Were parts associated with movement of equipment improperly excluded? | <ul style="list-style-type: none">• Are inputs to military values reasonably presented, particularly with regard to Quality of Life?• Are other aspects of military value, such as publications, crime, etc. correct? |
|---|--|

ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Impact of loss of Deep Pressure Tank and Fluid Dynamics Facility	Facilities can be abandoned after 2001 (earlier position was 1998)	Facilities needed by Navy after closure	Navy says that facilities can be abandoned after 2001. Unable to accurately predict cost of conducting tests through alternative means
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ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

(Continued)

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
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SCENARIO SUMMARY

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

DoD RECOMMENDATION	
(State DoD recommendation)	
One Time Costs (\$M): 24.6 Steady State Savings (\$M): 11.7 Return on Investment: __2__ years (2000) Net Present Value (\$M): 135.3	
PRO	CON
<ul style="list-style-type: none"> Reduces Navy and DoD laboratory employment which will assist in reaching goal of 30-35% reductions 	<ul style="list-style-type: none"> Can Navy afford to lose two major facilities slated for abandonment (Deep Pressure Tank and Fluid Dynamics Facility) Cost of testing alternatives in absence of Deep Pressure and Fluid Dynamics Facility Is downtime associated with movement of other facilities from Annapolis to Philadelphia acceptable in terms of impact on major programs (particularly CFC replacement) Is the BSAT correct in its approach that since Civil Servants are already on the Navy payroll, they may be directed to move equipment instead of performing research and there is no cost for that work? What are financial implications of enabling tenant to remain on base? What are financial implications of enabling tenant's contractor to move on base, assuming that base remains open? Are other cost associated with the proposed move correct. No base is closed

SCENARIO SUMMARY

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

(Continued)

DoD RECOMMENDATION	
(State DoD recommendation)	
One Time Costs (\$M): Steady State Savings (\$M): Return on Investment: ____ years (2001) Net Present Value (\$M):	
PRO	CON
	<ul style="list-style-type: none"> • Synergy with Naval Academy • Incorrect BOS and RPMA costs in COBRA • Water and fuel dispensing/service provided by NSWC to USNA • Industrial Base issues • MILCON at Philadelphia • Were costs of contractor support for move improperly excluded? • Were costs of prices associated with parts for equipment to be moved reflected in the COBRA?

CAN NAVY AFFORD TO LOSE TWO MAJOR FACILITIES SLATED FOR ABANDONMENT?

(Deep Pressure Tank and Fluid Dynamics Facility)

- **Original submission said Navy does not require these facilities and can abandon them before 1998**
- **Testing in support of CFC , NSSN, and Seawolf programs must continue at Annapolis through 2001**
- **Navy says it can do without these facilities, but can SHIPALTs and new classes of ships and submarines be built without these two systems?**

COST OF TESTING ALTERNATIVES WITHOUT

Deep Pressure and Fluid Dynamics Facility

???

**ACCEPTABILITY OF DOWNTIME
ASSOCIATED WITH MOVEMENT OF FACILITIES
(particularly CFC replacement)**

**FOR COST PURPOSES, MAY CIVIL SERVANTS BE DIRECTED
TO MOVE EQUIPMENT INSTEAD OF PERFORMING RESEARCH,
SINCE THEY ARE ALREADY ON THE PAYROLL
AND THERE IS NO COST FOR THAT WORK?**

WHAT ARE FINANCIAL IMPLICATIONS OF ENABLING NSW TENANT TO REMAIN ON BASE

- 1. Base is receiving about \$200 K per year in reimbursement.**
- 2. Lease cost of \$700 K per year means**
- 3. there is an additional savings of about \$500K per year**
- 4. NPV of about \$16M**

**WHAT ARE FINANCIAL IMPLICATIONS
OF ENABLING TENANT'S CONTRACTOR TO MOVE ON BASE,
ASSUMING THAT NSW C REMAINS OPEN?**

- **Cost of tenant's contractor lease and "BOS" costs are about \$2.056 M .**
- **Reduced mileage and time lost totals about \$ 0.213 M per year.**
- **This would be offset by one time cost of rehab cost and increased RPMA and BOS of xxxxx ,**
- **NPV for tenant is xxxxx**

**ARE OTHER COSTS ASSOCIATED WITH THE PROPOSED MOVE
CORRECT?**

- 1. Moving costs (government personnel, contractors, parts)**
- 2. Delayed closing of facilities, including remaining BOS and RPMA**
- 3. Water treatment plant**
- 4. JSC and tenant**
- 5. Alternative testing**

NO BASE IS CLOSED

Base is surrounded by Severn River and Naval Station Annapolis

SYNERGY WITH UNITED STATES NAVAL ACADEMY

- 1. Dean of Naval Academy explained that Midshipment engineering majors are exposed to real-world problems**
- 2. Top students can be given special study projects at NSWC**
- 3. Faculty can work at NSWC on projects when not required to be on campus**
- 4. Faculty can get relevant summer vacation paying jobs for, what is for NSWC, bargain rates -- and they're a good deal for the faculty also**

INCORRECT BOS AND RPMA COSTS IN COBRA

- 1. Error in rates was corrected**
- 2. BOS, RPMA, and personnel costs and numbers should be adjusted to take into account need to keep parts of NSWC open until 2001**

WATER AND FUEL DISPENSING SERVICE PROVIDED TO USNA

- 1. BSAT originally said there was no cost, it was just a transfer of funds**
- 2. Revised BSAT response was that Naval Academy reimburses NSWC for half of the cost of providing water and fuel to Naval Academy and Naval Station**
- 3. Actually, reimbursement is only for water and utilities -- labor is not reimbursed and additional cost associated with closing NSWC is recurring cost of \$275 K, which is approximately \$4.5 M NPV**

INDUSTRIAL BASE ISSUES

- 1. Traditional perspective on industrial base issue is shipyards**
- 2. Significant international work involving numerous aspects of C4I**
- 3. Does not appear to be private sector interest or other DoD interest in things like ship silencing**

MILCON AT NSWC PHILADELPHIA

**Philadelphia community shows higher expenses at
NSWC Philadelphia than does the Navy**

**WERE COSTS OF CONTRACTOR SUPPORT FOR MOVE IMPROPERLY
EXCLUDED?**

Moving Costs

WERE COSTS OF PARTS FOR MOVE IMPROPERLY EXCLUDED?

Moving Costs

PLEASE PUT UP SLIDES H -13 AND H-14

THE CURRENT DEPARTMENT OF DEFENSE RECOMMENDATION IS TO CLOSE NSWC ANNAPOLIS, TRANSFER 7 OF ITS 10 MAJOR FACILITIES TO PHILADELPHIA, REBUILD ONE IN CARDEROCK OR ELSEWHERE, AND ABANDON TWO.

THE NAVY JUSTIFIED THE PROPOSED CLOSURE , BY SAYING THAT SHARP DECLINES IN TECHNICAL CENTER WORKLOAD THROUGH 2001 WILL LEAD TO EXCESS CAPACITY IN THESE LABORATORIES. THIS EXCESS AND THE IMBALANCE IN FORCE AND RESOURCE LEVELS DICTATE CLOSURE/REALIGNMENT OR CONSOLIDATION OF ACTIVITIES WHEREVER PRACTICABLE. TO THIS REMARK, ANNAPOLIS COMMUNITY POINTED OUT IN BRIEFING MATERIAL THAT EVEN WITH A 40% REDUCTION IN FUNDING, ALL OF ITS WORKFORCE WOULD BE FULLY FUNDED.

THE COBRA PREPARED BY THE NAVY REFLECTS THE ELIMINATION OF 138 BILLETS, OF WHICH OVER 40% ARE TECHNICIANS AND OTHER SUPPORT PERSONNEL. THIS RESULTS IN A SAVINGS WITH A NET PRESENT VALUE OF \$135 M. THE COMMUNITY HAS EXPRESSED NUMEROUS CONCERNS OVER THIS RECOMMENDATION, THE MOST IMPORTANT OF WHICH I'D LIKE TO SHARE WITH YOU.

THE MOST SIGNIFICANT ISSUE IS THE PLANNED ABANDONMENT OF THE DEEP OCEAN AND THE FLUID DYNAMICS FACILITIES.

- THE DEEP OCEAN FACILITY ENABLES RESEARCHERS TO EXERT PRESSURES ON LARGE PIECES OF EQUIPMENT, SOME AS LARGE AS A DEEP SUBMERGENCE RESCUE VEHICLE, TO PRESSURES AS GREAT AS THOSE FOUND AT DEPTHS EXCEEDING 23,000 FEET

IT IS THE ONLY FACILITY IN THE WESTERN HEMISPHERE THAN CAN TEST EQUIPMENT OF THIS SIZE AND SIMULATE SUCH DEPTHS. IT ALSO HAS THE FAIRLY UNIQUE ABILITY TO EXTRACT HEAT AS PRESSURE BUILDS AND DEPTHS INCREASE. TV CAMERAS FACILITATE AN UNDERSTANDING OF WHAT IS TRANSPILING IN THE CHAMBER

- THE ANNAPOLIS COMMUNITY AND NAVSEA PROJECT MANAGERS STATED THAT TESTS PERFORMED BY OR ON BEHALF OF NAVY IN THE CHAMBER WOULD COST ABOUT ONE TENTH AS MUCH AS LIVE TESTING AND SUGGESTED THE ADDITIONAL COSTS FOR 1966 ALONE MIGHT BE CLOSER TO \$5 MILLION. NAVY OFFICIALS RESPONDED WITH DATA WHICH SUPPORTED A CONCLUSION THAT THE INCREASED COSTS ASSOCIATED WITH ALTERNATIVE TESTING METHODS ON TESTS BEING CONDUCTED BY OR ON BEHALF OF THE NAVY WOULD HAVE A NET PRESENT VALUE OF ABOUT \$5 MILLION. THEY EXPLAINED THAT ON SOME TESTING, THERE WOULD BE SOME MINOR DEGREE OF RISK. OTHER TESTING, PERHAPS AMOUNTING TO ABOUT TEN PERCENT OF TESTING WHICH WOULD HAVE BEEN CONDUCTED AT ANNAPOLIS WOULD BE TOO DANGEROUS TO CONDUCT.

AN EXAMPLE OF TESTING BY ALTERNATIVE MEANS MIGHT INVOLVE TAKING A DEEP SUBMERGENCE RESCUE VEHICLE OR DSRV TO SEA ON A CRANE EQUIPPED RESEARCH VESSEL, LOWERING THE DSRV, SUPPORTED BY CABLES ATTACHED TO THE SHIP, TO A DEPTH OF ONE AND ONE-HALF TIMES DESIGN DEPTH. FY 96 TESTING IS ESTIMATED TO COST ABOUT \$600 K, IMPLYING A MARGINAL COST IF ALL TESTS WERE PERFORMED IN A LIVE ENVIRONMENT OF OVER \$5 MILLION.

- THE FLUID DYNAMICS FACILITY, THE OTHER FACILITY TO BE ABANDONED, WAS BUILT AFTER THE DISAPPEARANCE OF THE THRESHER TO STUDY HOW FLUIDS ACT UNDER HIGH PRESSURE. THE COMMUNITY SAYS IT IS THE ONLY FACILITY OF ITS TYPE AND CAPABILITY. ESTIMATED COSTS IN A LIVE ENVIRONMENT WOULD COST 10 - 12 TIMES THAT IN A LABORATORY. THESE COSTS DO NOT INCLUDE THE COST OF THE SHIP OR SUBMARINE OR ITS CREW. THE NAVY PROVIDED AN EXAMPLE OF LIVE TESTING THAT WOULD NECESSITATE BRINGING A VESSEL INTO A DRY-DOCK TO BE OUTFITTED FOR THE TEST, SENDING IT OUT TO SEA FOR THE TEST, AND THEN RETURNED SO ORIGINAL CONFIGURATION CAN BE RESTORED. CURRENT FY96 PLANS ARE FOR ABOUT \$1.2 MILLION IN TESTING IN THIS FACILITY, REPRESENTING A MARGINAL COST OF ABOUT \$13 MILLION IN AT SEA TESTING, IF ALL TESTING WERE PERFORMED. THE NAVY SAID WITH SOME MODIFICATIONS, FACILITIES AT NSWC PHILADELPHIA COULD BE MODIFIED TO ACCEPTABLY PERFORM TESTS HERE-TO-FOR PERFORMED AT ANNAPOLIS AT NO ADDITIONAL COST, OTHER THAN THE FACILITY MODIFICATIONS.

- WHEN THE DBCRC RECEIVED THE BSAT'S RECOMMENDATIONS, THE SCENARIO WAS TO CLOSE NSWC BY 1998. AFTER RECEIVING QUESTIONS FROM THE STAFF DEALING WITH SUPPORT OF THE SEAWOLF AND SSN-21 PROGRAMS, THE NAVY REVISED ITS PLAN TO SHOW ABANDONMENT OF THE FLUID DYNAMICS FACILITY IN 2000. THE ANNAPOLIS COMMUNITY SAYS THE FACILITY WILL BE NEEDED AT LEAST FOR 3-4 YEARS BEYOND THIS.

A SECOND MAJOR ITEM OF CONTENTION WAS THE NAVY'S POSITION THAT THE COBRA ANALYSIS DID NOT HAVE TO REFLECT THE COST OF THE SALARIES OF GOVERNMENT EMPLOYEES WHO WERE ASSIGNED TO UNHOOKING, REHOOKING, AND RECALIBRATING EQUIPMENT BECAUSE THOSE COSTS COULD BE OFFSET BY THE SAVINGS WHICH COULD

BE ACHIEVED BY ELIMINATING POSITIONS MORE RAPIDLY. DESPITE SOME RESERVATIONS, THE R & A STAFF ACCEPTED THAT POSITION.

THE BSAT PREPARED COBRA ALSO DID NOT INCLUDE ANY COSTS FOR MOVING THE EQUIPMENT TO PHILADELPHIA AND ANNAPOLIS, OTHER THAN THE COBRA-CALCULATED COSTS OF MOVING AND PACKING NONE-SPECIALIZED EQUIPMENT. THE STAFF ADDED ESTIMATED COSTS FOR CONTRACTOR SUPPORT FOR THE MOVE AND FOR ANCILLARY PIPES AND VALVES WHICH PROBABLY WOULD HAVE TO BE REPLACED IN CONJUNCTION WITH THE PROPOSED MOVE.

PLEASE TAKE DOWN SLIDE H-13 AND PUT UP SLIDE H-15

THE COMMUNITY EXPRESSED CONCERN OVER LIKELY INTERRUPTION OF THE CHLOROFLUOROCARBON (CFC) ELIMINATION PROGRAM. THIS PROGRAM IS NECESSARY TO ENSURE THE NAVY CONFORMS WITH THE PROVISIONS OF THE INTERNATIONAL TREATY BANNING CFC USE. OUR QUESTIONS AND NSWCC CONCERNS LEAD TO WHAT APPEARS TO BE A WORKABLE PLAN TO MOVE THE WORK IN PHASES TO PHILADELPHIA. HOWEVER, THE STAFF CONCLUDED THAT IT WAS NOT SUFFICIENT TO KEEP ANNAPOLIS OPEN UNTIL THE 2001, BUT THAT THE NAVY NEEDED BILLETTS TO CONTINUE WORK IN REFRIGERANTS, AS GLOBAL WARMING AND OTHER ENVIRONMENTAL PROJECTS WERE LIKELY JUST OVER THE HORIZON. STAFF ADDED BILLETTS TO THE NUMBER PREVIOUSLY SCHEDULED TO MOVE TO PHILADELPHIA.

THE COBRA PREPARED BY THE STAFF DELAYED THE TRANSFER OF SOME ANNAPOLIS BILLETS TO PHILADELPHIA IN ORDER THEY MIGHT SUPPORT FLUID DYNAMICS AND CFC WORK, ADDED COSTS FOR EQUIPMENT MOVEMENT, KEPT PART OF THE ANNAPOLIS FACILITY OPENED UNTIL 2001, AND PERMITTED SOME OF THE BILLETS FOR CFC AND REFRIGERANT R & D TO TRANSFER TO PHILADELPHIA.

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Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

DOD RECOMMENDATION:

- Close NSWC, Carderock Division, Detachment Annapolis, including the NIKE Site, Bayhead Road, Annapolis.
 - Transfer the fuel storage/refueling sites and the water treatment facilities to Naval Station, Annapolis to support the U.S. Naval Academy and Navy housing.
 - Relocate appropriate functions, personnel, equipment and support to other technical activities, primarily NSWC, Carderock Division, Detachment, Philadelphia, PA; NSWC, Carderock Division, Carderock, MD; and Naval Research Laboratory, Washington, DC.
- Joint Spectrum Center (DoD cross-service tenant) will be relocated with other components of the Center in the local area as appropriate.

CRITERIA	REVISED DOD RECOMMENDATION
MILITARY VALUE	8 of 13
FORCE STRUCTURE	N/A
ONE-TIME COSTS (\$ M)	24.6
ANNUAL SAVINGS (\$ M)	11.7
RETURN ON INVESTMENT	2000 (2 years)
NET PRESENT VALUE (\$ M)	135.3
BASE OPERATING BUDGET (\$ M)	15.6
PERSONNEL ELIMINATED (MIL / CIV)	1/138
PERSONNEL REALIGNED (MIL / CIV)	1/280
ECONOMIC IMPACT (BRAC 95 / CUM)	- 0.0 % / - 0.6 %
ENVIRONMENTAL	No Significant Issues

H-13

ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Impact of loss of Deep Pressure Tank and Fluid Dynamics Facility	Facilities can be abandoned after 2001 (earlier position was 1998)	Facilities needed by Navy after closure	Navy says that facilities can be abandoned after 2001. Unable to accurately predict cost of conducting tests through alternative means
Is work performed by government employees in preparation for a move a cost of the move?	Not a COBRA cost	Costs must be recognized	Costs have been reflected because billets could be eliminated more rapidly
Joint Spectrum Center (NSWC tenant)	Cost of additional operating costs offsets savings from not paying rent.	Savings can be achieved by keeping tenant and host on Government property.	Moving and occupying Government-Owned space, with contractor off-site in leased space would generate similar savings
Does Navy need to retain refrigeration R & D capability?	Annapolis personnel not required	Refrigeration R & D will be needed even after chlorofluorocarbon (CFC) project is completed	Revised COBRA realigns staff
COBRA treatment of moving costs	COBRA is correct	DoD understated moving costs	Revised COBRA reasonably reflects moving costs

H-14

ISSUES

Naval Surface Warfare Center - Carderock, Detachment Annapolis, MD

(Continued)

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Costs of running base until 2001	COBRA needs no revision	Costs of running base until 2001 are not reflected in cost analysis	Revised COBRA reasonably reflects adjusted base operating costs
Base is surrounded by Naval Station Annapolis and Severn River	No position	Navy will not be able to dispose of its property	Disposal problems do not significantly affect projected savings
COBRA excursion reflects keeping base open, and maintenance of CFC and Fluid Dynamics Facility, retention of refrigeration R & D personnel, and addition of moving costs	Costs and personnel changes not required	Moving costs still understated; MILCON understated; savings could be recognized by keeping Joint Spectrum Center on NSWC compound and moving its contractor onto compound; additional overhead personnel are needed during final years;	NPV \$81.2 M 1-time costs \$55.6 M ROI 3 years Recurring savings: \$10.5 M

H-15

Document Separator

Department of the Navy
Base Structure Analysis Team

BSAT

Facsimile Transmission
Cover Sheet

Date: 6/22/95

From: Don DeYoung 681-9174
Office: (703) 681-0478 Fax: (703) 756-2174

To: Alex Yellin / Dave Epstein

FAX: 696-0550

Number of Pages (including cover page): 18

BSAT**BASE STRUCTURE ANALYSIS TEAM**

4401 Ford Avenue • Post Office Box 16268 • Alexandria, Virginia 22202-0268 • (703) 681-0490

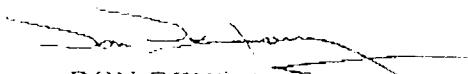
BSAT/DD
22 June 1995

MEMORANDUM

From: Navy BSAT, D. DeYoung
To: Alex Yellin, BRAC Commission Staff

Subj: FINANCIAL IMPACT OF CLOSING DEEP PRESSURE AND FLUID DYNAMICS
FACILITIES AT NSWC ANNAPOLIS

The response to questions regarding the subject facilities is attached. This information was requested for Commissioner Davis' visit to NSWC Annapolis on 19 June. Please note that it has been certified up through the NAVSEA chain of command. I have attached an earlier memorandum, dated 14 June, to provide a more complete response to your questions regarding the two facilities.


DON DEYOUNG

BSAT**BASE STRUCTURE ANALYSIS TEAM**

4401 Ford Avenue • Post Office Box 16268 • Alexandria, Virginia 22302-0268 • (703) 681-0490

BSAT/DD

14 June 1995

MEMORANDUM

From: Navy BSAT, G.R. Schiefer

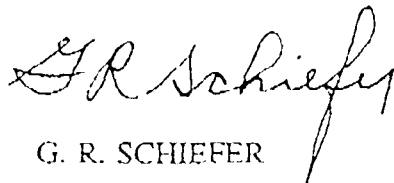
To: Alex Yellin, BRAC Commission Staff

Subj: FINANCIAL IMPACT OF CLOSING DEEP PRESSURE AND FLUID DYNAMICS
FACILITIES AT NSWC ANNAPOLIS

The DoN base closure process requires the exercise of military and technical judgment by the Navy chain of command. In this case, the proposed closure of the subject facilities was reviewed by all DoN senior officers and managers as owners/operators (e.g., SYSCOMS, CINCs, etc.), including the entire NAVSEA chain of command above the Annapolis site. It was the judgment of these military and technical experts that the facilities in question could be closed.

In addition, the guidance provided with each Scenario Development Data Call Tasking specifically states, "only essential functions, equipment, etc., should be relocated...all others should be eliminated/excessed...provide a detailed narrative explanation on the specific operational requirement that supports movement to another location." Therefore, the Navy process requires detailed justification in cases where facilities are retained. Detailed operational and financial information is not specifically required for individual facilities judged unnecessary by the Navy chain of command.

To provide the information requested by the Commission, the BSAT has officially requested NAVSEA to prepare the responses to your questions and send them to the BSAT as soon as possible after the chain of command review. We will provide the data to you prior to Commissioner Davis' visit on 19 June.



G. R. SCHIEFER

N-19 JUN 19 93 02:42PM NSWC

P.277

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

James E. Baskerville

NAME (Please type or print)

Signature

Commander

Title

Date

NSWC Carderock

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

ADM D. P. SARGENT, JR.

NAME (Please type or print) Signature

COMMANDER

Title

Date

NAVAL SURFACE WARFARE CENTER

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR SLAUGHTER LEVEL

NAME (Please type or print)

E. S. MCGINLEY, II

Rear Admiral, U.S. Navy

Title

Signature

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

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OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

To: G. Schiefel From: J. Atkins
Dist/Agency: 0 F/101 Project: ANSEVER
Fax: 1

NSN 7540-01-317-7555

5255-101

GENERAL SERVICES ADMINISTRATION

NAME (Please type or print)

Signature

Title

Date

June 19, 1995

Subj: RESPONSE TO PSAT QUERY OF 14 JUNE

Question: "What is the financial impact of alternative testing methods of the closure of the deep pressure and fluid dynamics facilities at Annapolis?"

Response:

The issue of an engineer or scientist using "alternative testing methods" is sometimes not fully understood by non-scientists, therefore, it is considered prudent to first provide a simple overview of "testing methodology". This will be followed by the response to the above question.

It should be noted that it is impossible to estimate all of the future needs for any unique combination of parameters in the use of any facility. It is similarly impossible to "second guess" what decision any one Program Manager or Design Engineer would have included or excluded from a test scenario if a less or alternative capability was required for any past or future situation.

As a consequence, any data package for the questions posed must be considered subjective and not "absolute" in their utility.

1. Testing Methodology Overview

As stated in the Scenario 3-20-0198-35A and subsequent "Request For Clarification" documents (RFC 001, RFC 007, RFC 011, RFC 014, RFC 015, RFC 016), the Deep Ocean Pressure Simulation Facility and the Submarine Fluid Dynamic Facilities are specially constructed to test a wide range of engineering parameters. The specific combination of the range of parameters and their technical specifications are what make these given facilities "unique" in the world.

The existence of these specially designed facilities allows the research scientists and engineering disciplines to exercise a wider range of options than would be available from alternative resources. Alternative resources or options may be to (1) conduct tests in other facilities or "at-sea" and proceed with the designs; or (2) do not conduct the tests.

These decisions are made for each design package through a combination of cost, system performance risk assessments, and engineering judgement.

In the situation where the design engineer or scientist must utilize alternate land based test facilities or at-sea testing, the options exist to use mathematical modeling (i.e. simulation models), lesser or equal quality test facilities with a narrower range of test performance specifications, or conduct at-sea testing with less control of the test environmental parameters. In many cases, the other land based test facilities will provide data of equal quality over a narrower range of parameters with little or not increased risk or cost. The at-sea tests could be of greater cost and increased risk, but that is a design and program manager assessment for that application - i.e. a professional judgement issue.

If it is decided not to conduct a test, then it can be due to either it is technically unfeasible or the cost-to-risk and/or cost-to-benefit analysis determines it is unnecessary. If it is technically unfeasible, then the engineering designs will have to accommodate the performance parameters with land based testing as best as possible.

2. Deep Ocean Simulation Test Facility

The more significant specialized test features of the Deep Ocean Simulation Test Facility include its ability to test a large test specimen in a horizontal position at depths greater than any other pressure vessel in the world while extracting any heat generated by the processes (either due to the vehicle or due to the rapid cycling of the pressure ranges within the vessel).

Alternative methods of testing for this specific combination of test specifications are not available at any other single site. The engineers and scientists, upon the closure of this facility, will have to use a combination of testing alternatives to obtain their data. As stated above, the resulting tests will range over the option matrix from "no increased risk" to "increased risk" as well as "no increased cost" to "not affordable".

In an effort to provide a response to the question "What is the financial impact of alternative testing methods of the closure of the deep pressure facilities at Annapolis?", the below assumptions have been made:

- The next five years of operations will have the same mix of project types and testing scopes; and
- Program Managers and Design Engineers will assume the same risk assessments as the analyst providing the answers to this query.

A summary of the 21 applicable tests conducted since 1990 were provided in Request For Clarification 011 and will not be

repeated herein. Of those 21 tests, the below alternatives could be applied:

- Use of other Pressure Tanks with "No Significant Cost Impact" and "No Significant Increased Risk" included cable specimen tests and non-wide band transducer array tests. This accounted for approximately 26% of the tests conducted since 1990 in this facility.
- Use of other Land-Based facilities with "Some Increased Risk" but with "No Significant Cost Impacts" accounted approximately 32% of the tests conducted since 1990. This includes the use of less rated pressure vessels for the testing of acoustic panels, acoustic transducers, smaller test specimens possibly coupled with mathematical models, and related engineering test method combinations.
- Use of "At-Sea" testing of non-submarine related specimens on instrumented or controlled ranges would account for approximately 20% of the test types conducted since 1990. The customer costs for the use of a Navy Range Support vessel, e.g. at the Port Lauderdale test facility which would have met many of these test requirements, is approximately \$16K per day of range testing.
- Use of "At-Sea" testing of submarine related specimens on a "dedicated submarine" would account for approximately 10% of the test types conducted since 1990. A review of the tests conducted indicated only the SSN 21 "Secondary Power" unit would have utilized this method. It is believed at most one of these tests would have had to been conducted in this manner. This would require the use of Dry Docking facilities to mount/dismount the unit plus at-sea tests. The Dry Docking costs are estimated at \$50K per day plus "set-up" costs of approximately \$120K. The Submarine operational costs are not normally "customer funded", but operationally supported by the OPTIMPO resource.
- Due to the combination of technical options or the system integration elements, there are certain types of tests that can not be accomplished in any of the above alternative methods. Taking into consideration the Design Engineer's and Program Manager's perspective of "availability of alternative test facilities", approximately 10% of the types of tests could not be accomplished. Based upon past experiences, many design considerations would be impacted and risks would be assumed, e.g. additional time for safety dives, increased material applications, etc. Any cost estimate for such considerations would be purely speculative.

A summary of the test durations and types of tests, as described above and in RFC 011, provides the below alternative cost impacts:

a. "At-Sea Testing With Non-Submarine Required Specimens":

"Daily" Range Costs:	\$18K
Estimated Days Of Tests/Specimen	10 days
Number of Specimen Projects	4
Net Cost Impact:	\$720K

b. "At-Sea Testing With Dedicated-Submarine Required Specimens":

"Daily" Range Costs:	\$75K
Estimated Days Of Tests/Specimen	2 days
Dry Dock Cost/Operation	\$450K
Number Of Dry Dock Operations	1
Number of Specimen Projects	1
Net Cost Impact:	\$600K

For a "net cost comparison" baseline, the Deep Ocean^{4,500} Simulation Facility "Service Cost Center" use rate is \$450 per day, excluding the labor costs for performing the specified test support requirements (specimen specific). Therefore, using the assumptions articulated above and a projected "fully burdened" labor rate of \$130 per hour, the net cost impact is approximately \$1,284K over a five year period. DJD
per Capt Daskerville
6/21

2. Submarine Fluid Dynamic Facility

The more significant specialized test features of the Submarine Fluid Dynamics Test Facility include its ability to test the acoustics generated by fluid flow through valves and piping arrangements in a low acoustic ambient situation over a long period of time. The overall facility also has the ability to conduct "ballast blow" tests on the related machinery components, but this has not been required for several years.

The major issues relate to the "test duration" requirements and the ambient acoustic controls (including valve-piping isolation from the high pressure source). A FY 98 closure will provide for meeting the near-term sensitive submarine development taskings. Based upon existing risk assessments, the DoN has made the decision that existing facilities could be modified, e.g., at the Philadelphia Detachment, for meeting the present state-of-the-art requirements after closure. When advances in the state of the art are required, additional modifications to the then existing facilities will be required. Thus, for the assumed existing risks, closure provides a "no additional cost impact" assessment.

Document Separator

May 2, 1995

CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for all of your assistance during my recent visit to NSWC Carderock Division, Annapolis Detachment. The briefings and discussions with you, your staff and the community provided us with a great deal of valuable information about the operations at Annapolis. This information will be very helpful to the Commission as we carry out our review of the recommendations of the Secretary of Defense in the months ahead.

Please extend my appreciation to the members of your staff for their assistance. The overview briefing and tour conducted by Mr. Tim Doyle and CDR Roger Walker were very informative. I greatly appreciated the remarks by COL Flock and Dean Shapiro, and would also like to thank Mr. James Scott for his efforts in planning and coordinating the base visit.

Sincerely,

RADM Benjamin F. Montoya, USN (RET)
Commissioner

FAX

Date 13Jun95

Number of pages including cover sheet 1

TO: MR. CHARLES
NEMFAKOS

Executive Director, BSAT

Phone 703-681-0450

Fax Phone 703-681-9174

FROM: Alex Yellin
*Review and Analysis-Navy
Team

Defense Base Closure
and Realignment
Commission

1700 N. Moore St., Suite
1425

Arlington, VA 22209*

Phone 703-696-0504

Fax Phone 703-696-0550

CC:

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

SUBJ: NAWC ANNAPOLIS

Mr. Nemfakos,

Our recent question on the impact of the closure of the deep pressure and fluid dynamics facilities at Annapolis was intended to include the financial impact of alternative testing methods in addition to the technical impact. During a conversation today between David Epstein and Mr. Schiefer he stated that the BSAT currently does not have this information.

In order to expedite the receipt of this information we plan to discuss this at the Commissioner base visit to Annapolis on 19Jun. Please discuss this with NSWC personnel prior to the base visit.



Document Separator

THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

EXECUTIVE CORRESPONDENCE TRACKING SYSTEM (ECTS) # 950419-6

FROM: EPSTEIN	TO: BASKERVILLE, JAMES E.
ROLE: NAVY ANALYST	TITLE: COMMANDER
ORGANIZATION: DBCRC	ORGANIZATION: NSWC CARDEROCK
INSTALLATION (S) DISCUSSED:	

OFFICE OF THE CHAIRMAN	FYI	ACTION	INT	COMMISSION MEMBERS	FYI	ACTION	INT
CHAIRMAN DIXON				COMMISSIONER CORNELLA			
STAFF DIRECTOR	✓			COMMISSIONER COX			
EXECUTIVE DIRECTOR				COMMISSIONER DAVIS			
GENERAL COUNSEL				COMMISSIONER KLING			
MILITARY EXECUTIVE				COMMISSIONER MONTOKA			
				COMMISSIONER ROBLES			
MR./CONGRESSIONAL LIAISON				COMMISSIONER STEELE			
MR./COMMUNICATIONS				REVIEW AND ANALYSIS			
				DIRECTOR OF R & A	✓		
EXECUTIVE SECRETARIAT				ARMY TEAM LEADER			
				NAVY TEAM LEADER	✓		
DIRECTOR OF ADMINISTRATION				AIR FORCE TEAM LEADER			
CHIEF FINANCIAL OFFICER				INTERAGENCY TEAM LEADER			
DIRECTOR OF TRAVEL				CROSS SERVICE TEAM LEADER			
MR./INFORMATION SERVICES							

TYPE OF ACTION REQUIRED

Prepare Reply for Chairman's Signature		Prepare Reply for Commissioner's Signature
Prepare Reply for Staff Director's Signature		Prepare Direct Response
ACTION: Offer Comments and/or Suggestions	✓	FYI

Subject/Remarks:

THANK YOU FOR ASSISTANCE DURING VISIT TO
NSWC CARDEROCK.

Date:	Routing Date: 950419	Date Originated: 950419	Mail Date:
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THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

1700 NORTH MOORE STREET SUITE 1425
ARLINGTON, VA 22209
703-696-0504

Please refer to this number

950419-6

April 11, 1995

ALAN J. DIXON, CHAIRMAN

COMMISSIONERS:

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REBECCA COX
GEN J. B. DAVIS, USAF (RET)
S. LEE KLING
RADM BENJAMIN F. MONTOYA, USN (RET)
MG JOSUE ROBLES, JR., USA (RET)
WENDI LOUISE STEELE

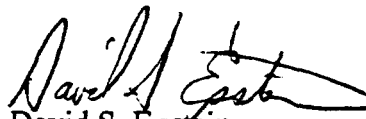
CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for all of your assistance during my recent visit to NSWC Carderock Division, Philadelphia Detachment. The briefings and discussions with you, your staff and the community officials provided a great deal of valuable information about the operations at Philadelphia, as well as its ability to accommodate NSWC Carderock, Annapolis Detachment assets. This information will be very helpful to the Commission as we carry out our review of the recommendations of the Secretary of Defense in the months ahead.

Please extend my appreciation to the members of your staff for their assistance. The overview briefing and tour conducted by Captain Rucker, as well as additional information provided by Dr. William Middleton and Mr. Tim Doyle were most helpful. I would also like to thank Ms. Sonya Rea for her assistance in coordinating travel arrangements.

Sincerely,


David S. Epstein
Commission Staff Member

May 20, 1995

CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for all of your assistance during my recent visit to NSWC Carderock Division, Annapolis Detachment. The briefings and discussions with you, your staff and the community provided us with a great deal of valuable information about the operations at Annapolis. This information will be very helpful to the Commission as we carry out our review of the recommendations of the Secretary of Defense in the months ahead.

Please extend my appreciation to the members of your staff for their assistance. The overview briefing and tour conducted by Mr. Tim Doyle and CDR Roger Walker were very informative. I also appreciated the remarks by COL Flock.

Sincerely,

Al Cornella
Commissioner

May 16, 1995

CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for making it possible for Dr. Mark Montroll to address a highly interested and concerned group of DBCRC staff members. Dr. Montroll's presentation this morning reflected years of thought and investigation into numerous aspects of ventures involving public and private organizations. We found his presentation and discussion fascinating, particularly with regard to DoD Technical facilities.

Please extend my thanks to Dr. Montroll for his work and well thought-out presentation.

Sincerely,

David S. Lyles
Staff Director

May 2, 1995

CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for all of your assistance during my recent visit to NSWC Carderock Division, Annapolis Detachment. The briefings and discussions with you, your staff and the community provided us with a great deal of valuable information about the operations at Annapolis. This information will be very helpful to the Commission as we carry out our review of the recommendations of the Secretary of Defense in the months ahead.

Please extend my appreciation to the members of your staff for their assistance. The overview briefing and tour conducted by Mr. Tim Doyle and CDR Roger Walker were very informative. I appreciated the remarks by COL Flock and Dean Shapiro, and would also like to thank Mr. James Scott for his efforts in planning and coordinating the base visit.

Sincerely,

RADM Benjamin F. Montoya, USN (RET)
Commissioner

March 28, 1995

CAPT James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for all of your assistance during my recent visit to NSWC Carderock Division, Annapolis Detachment. The briefings and discussions with you, your staff and the community officials provided us with a great deal of valuable information about the operations at Annapolis. This information will be very helpful to the Commission as we carry out our review of the recommendations of the Secretary of Defense in the months ahead.

Please extend my appreciation to the members of your staff for their assistance. The overview briefing and tour conducted by Commander Walker and Mr. Tim Doyle were very informative. I would also like to thank Mr. James Scott for his efforts in planning and coordinating the base visit.

Sincerely,

Rebecca G. Cox
Commissioner

May 27, 1995

Captain James E. Baskerville, USN
Commander, Carderock Division, Naval Surface Warfare Center
Headquarters, David Taylor Model Basin
Bethesda, MD 20084-5000

Dear Captain Baskerville:

I want to thank you for coordinating Dr. Mark Montroll's briefing to Commission staff members. On behalf of all the Commission staff members present, please extend my appreciation to Dr. Montroll for his interesting and instructive presentation. Dr. Montroll's briefing on Department of Defense technical facilities and his insights into public-private ventures were enlightening, and will be useful to our continuing review and analysis of the nation's military infrastructure.

Thank you again for your efforts. Your assistance is very much appreciated.

Sincerely,

David S. Lyles
Staff Director

DSL:cjg

Wn Oat older
devoted to degaus

measuring signature of models made
magnetically accurate. Can put
coils around parts of ship to
eliminate signature (countermeasure)

1950 Annapolis controls larger volume & control/
similar capability Measure sig
ambient field of full scale equip under load
control power supply etc

White Oat has add'l facilities
can measure sig at diff. freq.

36,000
Miniature models - effect of
ion not equipment

secure
secure centre
Comm
Control
main frame
SCIF
Add'l build in Annapolis
power sig & sink
Add'l smaller facil/

Upgrading Annap to handle
large (sub) models so insert
into building

Have let contract for design

Essential
all white
Oat
cap

Document Separator

5 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA

The SPAWAR community has developed an extensive analysis of issues relating to the proposed move of SPAWAR to San Diego. Enclosure (1) was presented to the BRAC. Feel free to comment on any aspects of this document, but at a minimum, please respond to the following questions:

1. Moving SPAWAR appears to be at variance with both SPAWAR data call 31 which stated the strong need for SPAWAR to remain in the NCR and Under SECNAV Danzig's policy imperatives which states that DON must collocate the acquisition workforce for ACAT programs with the Service Acquisition Executive to ensure efficiency, timeliness, and effectiveness of the acquisition work force (BSEC Memorandum of 19 Sep 94 Mtg). Please explain.
2. Community representatives stated that SPAWAR belongs in close proximity to NAVAIR, NAVSEA, NRL, NSA, CIA, U.S. Customs Service, Army, Air Force, USMC, foreign embassies, CINCLANTFLT, Defense Airborne Reconnaissance Office, Advanced Research Program Administration, Naval Security Group, National Reconnaissance Agency, Defense Intelligence Agency, Naval Intelligence, Special Operations Command, NISE East, St. Inigoes, etc. Please explain whether or not this is correct. If not correct, please explain why. Is this requirement going to be satisfied through teleconferencing from San Diego or meetings involving the 15 employee SPAWAR staff left in Washington? Does the BSAT envision that contact with such groups will no longer be required? The community states that the proposed move will result in greatly increased travel costs and employee time spent on travel. If BSAT agrees, please correct the COBRA.
3. The community claims that SPAWAR can accomplish similar or larger reductions through elimination of NCCOSC and parts of SPAWAR which contain large numbers of overhead personnel. Please explain whether this is possible and if not, why not. If possible, how many positions could SPAWAR closing NCCOSC and eliminating the excess positions at SPAWAR?
4. The community claims there is extensive duplication between NAVSEA and SPAWAR? If you agree, how many positions could be eliminated by removing the duplication. If you disagree, please respond to the concepts provided at Tab S.
5. CNO announced, as reported at Tab G, that SECNAV/CNO will study Systems Command Organization issues. What are the interim (or final) results of this study?

6. (BRAC Staff) The Joint Cross-Service Group recommended SPAWAR to Fort Monmouth or Hanscomb Field AFB. The Navy analysis appears to have made different assumptions when examining these alternatives, as compared to the San Diego move. Please explain the differences.

7. Please respond to community questions why Code 40 and the PEO are the only parts of SPAWAR which must remain in Washington.

8. It appears the Navy did not develop scenarios and costs for remaining in the National Capital Region. Scenarios of interest might have included collocating NAVSEA and SPAWAR in Washington, locating several other commands at one location in Washington, or consolidating NCCOSC with SPAWAR in NCR. Why were these scenarios not run, or if they were, please provide them.

9. Are the lengthier communication lines between SPAWAR and foreign governments involved in NATO, Foreign Military Sales, etc. a concern? If so, how will they be addressed without additional security concerns?

10. The community stated that SPAWAR overhead is excessive. Please describe prior efforts to address this situation, if indeed a problem does exist.

11. Community pointed out that due to the difference in time zones, most of San Diego's work day does not coincide with that in Washington and this will result in additional inefficiency when a San Diego based SPAWAR attempts to communicate with its East Coast sponsors. Will this communication be handled by the 15 person Washington contingent?

12. Community claims that BSAT greatly underestimated the cost of providing facilities for SPAWAR in San Diego. Please explain approximately how many SPAWAR staff would be physically located at each of Point Loma, Plant 19, and any other locations. Please explain how the BSAT derived the costs of MILCON and other physical accommodations for SPAWAR in San Diego. (We noted that in BRAC TALK, apparently produced by some part of the SPAWAR organization, dated 25 May 95, it is reported that there will be costs of refurbishing office space in San Diego to house SPAWAR employees.)

Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA

COMMUNITY CONCERNS

The community believes that the proposal does not reflect the significance of a Washington location to their mission performance. Most of the other organizations they work with are either in the local area or in easily reached East Coast locations. The very small staff proposed for retention in Washington would not be able to continue their current activities. This would result in major increases in travel costs and lost staff time that were not included in the Navy analysis. They also stated that equivalent personnel savings could be made without a move through the reorganization of the subordinate commands currently in San Diego and elimination of excess overhead personnel at SPAWAR Headquarters, possibly through consolidation with Naval Sea Systems Command. The community also noted that the cost of renovating office space in San Diego was not included in the Navy's cost estimates for this proposal.

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31 May 95

From: David Epstein
To: Charles Smith

Via: (1) Alex Yellin

Subj: Space and Naval Warfare Command (SPAWAR) Recommendation

1. It appears that the Navy underestimated the cost of refurbishing warehouse space at Plant 19 for SPAWAR. Please modify the COBRA and/or explain how Navy proposes to establish office space at Plant 19 or at Point Loma without expenditure of MILCON or other funds. It is the opinion of staff that there is not adequate space at Point Loma to accommodate additional personnel.
2. Staff is concerned with travel estimates. Please explain the development of the additional and eliminated travel costs.

6/12/95

From: David Epstein

To: Bob Bivins

Subj: SPAWAR COBRA

1. Please run a revised COBRA for SPAWAR. The revised COBRA should be the same as that run by BSAT, except:

- Move 631 SPAWAR people to San Diego instead of 656
- Eliminate 395 positions instead of 405
- Retain 50 positions in the Washington office instead of 15
- Add \$4.7325 M as a one-time cost for MILCON to refurbish space (631 employees @ 150 square feet @ \$50/square foot)
- Make other appropriate changes to BOS and RPMA, as dictated by the model
-

9 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: SPAWAR Realignment

1. It appears the paradigm shift under which the BSAT envisions SPAWAR operations includes extensive use of teleconferencing. If this is correct, please provide a revised COBRA which reflects sufficient teleconferencing facilities for a substantial number of such meetings, recognizing that meetings which heretofore were conducted over a single 8 hour day will be conducted over two business days, recognizing time zone shifts. This would seem to imply the need to procure and support a substantial number of facilities.
2. During staff visits to NRAD, NCCOSC, and NISE West, we were under the impression that SPAWAR was to be located at the old Air Force Plant 19. Recent discussions indicate that it is envisioned that SPAWAR would move to Pt. Loma with NCCOSC and parts of NRAD.
3. Please describe the intended location of SPAWAR. In the event that this is at Pt. Loma, please explain where space can be found and modify the COBRA to reflect additional moving and refurbishment costs. If applicable, explain the movement of NCCOSC, NRAD, NISE West, and SPAWAR personnel between Plant 19 and Point Loma.

Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA

COMMUNITY CONCERNS

The Washington Community expressed concerns mostly related to three primary categories: costs, organizational issues, and, most importantly, geography. However, on an even more basic level, they stressed that moving SPAWAR defies a data call and the Under Secretary of the Navy's policy imperative which stated DON must collocate the acquisition workforce for major programs with the Service Acquisition Executive to ensure efficiency, timeliness, and effectiveness of the acquisition work force.

With regard to cost, the Community pointed out DoD estimates for building and refurbishing facilities were greatly understated. They pointed out huge amounts of money are going to be spent traveling to organizations with which SPAWAR has major interfaces, including OPNAV, National Security Agency, Naval Research Laboratory, Office of Naval Intelligence, Central Intelligence Agency, NAVSEA, NAVAIR, U.S. Customs Service, Army, Air Force, USMC, foreign embassies, CINCLANTFLT, Defense Airborne Reconnaissance Office, Advanced Research Program Administration, Naval Security Group, National Reconnaissance Agency, Defense Intelligence Agency, Special Operations Command, NISE East St. Inigoes, etc. The costs are not only those associated with paying for travel itself, but also the lost productivity related to a minimum of two days lost worktime with each trip including a meeting lasting several hours.

The community also expressed the belief that an equivalent number of billets could be eliminated without a move. They suggested that Naval Command, Control, and Ocean Surveillance Center (NCCOSC), in San Diego, is a redundant level of management which could be easily eliminated. They also pointed out that SPAWAR has a large overhead infrastructure which could be drastically reduced. They averred that there are about 1.4 overhead personnel in SPAWAR for each employee with direct project responsibilities. They suggested that reduced overhead would result in greater efficiency. Finally, they noted that there is significant overlap between NAVSEA and SPAWAR, much of which could be eliminated, particularly if the commands were collocated or at least both positioned within the Washington metropolitan area.

The major issue is, however, one of geography, and there are numerous aspects of this issue. They start with the fact organizations with which SPAWAR deals are on the East Coast and are predominantly in the metropolitan Washington, D.C. area. The community stated it is essential that contractors, the intelligence community, St. Inigoes, Navy headquarters, NAVAIR, and NAVSEA can all be reached within an hour or so and meetings at most other locations can be attended on an up and back basis all in the same day. Attending such meetings when traveling from San Diego involves at least a two and usually a three day commitment. The community also pointed out they have frequent meetings with personnel representing foreign NATO and Foreign Military Sales interests. Increased security risks would be associated with all of these geographic issues. Finally, due to the time zone difference, most of San Diego's work day does not coincide with that in Washington and there would be additional inefficiencies. They feel all of these reasons support the need, for SPAWAR to remain in the Washington, D.C. area.

The community also expressed other concerns, including the fact that Navy did not develop scenarios and costs for remaining in the National Capital Region, locating several commands at one location in Washington, or consolidating NCCOSC with SPAWAR in NCR. They also noted that the proposed move would result in the loss of experienced personnel

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- SPAWAR belongs in close proximity to NAVAIR, NAVSEA, NRL, NSA, CIA, U.S. Customs Service, Army, Air Force, USMC, foreign embassies, CINCLANTFLT, Defense Airborne Reconnaissance Office, Advanced Research Program Administration, Naval Security Group, National Reconnaissance Agency, Defense Intelligence Agency, Naval Intelligence, Special Operations Command, NISE East, St. Inigoes, etc.
- SPAWAR can accomplish similar or larger losses through elimination of NCCOSC and parts of SPAWAR
- Community estimates that there are huge costs associated with travel if SPAWAR moves to San Diego. Community rejects the concept that the 15 person Headquarters group can represent the projects to the extent that substantial additional travel will not be a necessity and also disagrees that teleconferencing can replace almost all face-to-face meetings
- Military value is undermined
- Move fragments SPAWAR activities (leaves Code 40 and PEO in Washington)
- Navy did not develop scenarios and costs for remaining in the National Capital Region, locating several commands at one location in Washington, or consolidating NCCOSC with SPAWAR in NCR
- SPAWAR contractors are primarily on the East Coast
- Loss of experienced personnel
- Loss of ready access to Navy Program sponsors/clients in the Pentagon and the NCR
- Mission performance would be slower, with higher costs and technical risks
- International cooperation (NATO, FMS, etc.) would be hampered
- Unnecessary and unacceptable security risks would be generated
- The ability to recruit and retain a qualified work force would be curtailed
- Travel to the East Coast, when it occurs takes at least 2-3 days and is very expensive
- Moving SPAWAR defies under SECNAV Danzig's policy imperatives which states that DON must collocate the acquisition workforce for ACAT programs with the Service Acquisition Executive to ensure efficiency, timeliness, and effectiveness of the acquisition work force (BSEC Memorandum of 19 Sep 94 Mtg)
- SPAWAR data call 31 established a similar requirement
- Due to the difference in time zones, most of San Diego's work day does not coincide with that in Washington
- Navy did not consider alternative locations in the NCR as directed by the BRAC
- SPAWAR overhead is disproportionate (excessive) to front line personnel performing primary mission functions (1.37 overhead employees for every "front line" employee)
- SPAWAR structure is out of line with modern management practice
- Reduction in overhead would improve efficiency
- Reducing, while remaining in NCR, would reduce overhead, preserve military value, maximize savings
- SPAWAR has duplicate positions within NAVSEA

Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA

COMMUNITY CONCERNS

The Washington community concerns mostly related to three categories: costs, organizational issues, and, most important, geography. On a more basic level, they stressed that moving SPAWAR defies a data call and the Under Secretary of the Navy's policy imperative which stated DON must collocate the acquisition workforce for major programs with the Service Acquisition Executive to ensure efficiency, timeliness, and effectiveness.

Regarding cost, the Community feels DoD estimates for building and refurbishing facilities were greatly understated. They pointed out that large sums are going to be spent on travel to Washington area DoD, non-DoD, NATO, and embassy locations. Costs include both travel and lost productivity related to at least two days of travel per trip including a meeting lasting several hours.

The community believes an equivalent number of billets can be eliminated without a move. They suggested that Naval Command, Control, and Ocean Surveillance Center (NCCOSC), in San Diego, is a redundant level of management which could be easily eliminated. They pointed out SPAWAR has a large overhead infrastructure which could be drastically reduced. They averred there are about 1.4 overhead personnel in SPAWAR for each employee with direct project responsibilities. Finally, they noted there is significant overlap with NAVSEA, much of which could be eliminated if the commands were both positioned within the Washington metropolitan area.

The major issue, geography, has numerous aspects. They note that the organizations SPAWAR deals with are on the East Coast and are predominantly in the metropolitan Washington, D.C. area. In addition to the increased costs and decreased costs associated with travel, they feel project coordination will suffer. Security risks would also increase. Finally, the fact that most of San Diego's workday does not coincide with Washington's will result in additional inefficiencies.

The community expressed other concerns, including the fact Navy did not develop scenarios and costs for remaining in the National Capital Region, locating several commands at one location in Washington, or consolidating NCCOSC with SPAWAR in NCR. They also noted the proposed move would result in the loss of experienced personnel

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Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA

COMMUNITY CONCERNS

The community believes that the proposal does not reflect the significance of a Washington location to their mission performance. Most of the other organizations they work with are either in the local area or in easily reached East Coast locations. The very small staff proposed for retention in Washington would not be able to continue their current activities. This would result in major increases in travel costs and lost staff time that were not included in the Navy analysis. They also stated that equivalent personnel savings could be made without a move through the reorganization of the subordinate commands currently in San Diego and elimination of excess overhead personnel at SPAWAR Headquarters, possibly through consolidation with Naval Sea Systems Command. The community also noted that the cost of renovating office space in San Diego was not included in the Navy's cost estimates for this proposal.

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Space and Naval Warfare Systems Command, Arlington, VA Redirect

DOD RECOMMENDATION:

- Change the BRAC 93 SPAWARS' recommendation from relocate "to Government-owned space within the NCR (National Capital Region)" to "to Government-owned space in San Diego, California, to allow consolidation of the Naval Command, Control and Ocean Surveillance Center, with the Space and Naval Warfare Command headquarters."
- This relocation does not include SPAWAR Code 40, which is located at the Naval Research Laboratory (NRL) in Washington, DC.
- This relocation does not include the Program Executive Officer for Space Communication Sensors and his immediate staff who will remain in Navy-owned space in the National Capital Region.

CRITERIA	DoD Recommendation Space and Naval Warfare Systems Command, Arlington, VA (RD)
MILITARY VALUE	8 of 9
FORCE STRUCTURE	N/A
ONE-TIME COSTS (\$ M)	24.0
ANNUAL SAVINGS (\$ M)	25.3
RETURN ON INVESTMENT	1996 (Immediate)
NET PRESENT VALUE (\$ M)	360.0
BASE OPERATING BUDGET (\$ M)	NA
PERSONNEL ELIMINATED (MIL / CIV)	47 / 358
PERSONNEL REALIGNED (MIL / CIV)	154 / 502
ECONOMIC IMPACT (BRAC 95 / CUM)	- 0.1 % / - 0.6 %
ENVIRONMENTAL	No Impact

ISSUES REVIEWED

Space and Naval Warfare Systems Command, Arlington, VA Redirect

- | | |
|---|--|
| <ul style="list-style-type: none">• Eliminates management levels.• Importance of location in Washington, DC.• Facility costs in San Diego.• Cost of consolidation in Washington in comparison to that in San Diego.• DoD Committee recommended Ft. Monmouth as a receiver.• Moving SPAWAR to San Diego could compromise SPAWAR's military effectiveness.• Proposal separates SPAWAR from NAVSEA and Navy Acquisition Executive• Proposal separates SPAWAR from C4I systems, technologies, and commands• Relocating SPAWAR to San Diego could affect ability to recruit and retain qualified work force• Moving to San Diego could create unnecessary and unacceptable security risks | |
|---|--|

ISSUES

Space and Naval Warfare Systems Command (SPAWAR), Arlington, VA Redirect

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Joint Cross-Service Group recommended Ft. Monmouth for C4I consolidation.	Navy non-concurred.	Proposals are to stay in Crystal City or in Maryland	No DoD proposal for C4I consolidation.
Eliminates management levels.	Eliminates management levels.	Management levels could be eliminated with siting in Washington, DC	R & A Staff concurs with DoD position.
SPAWAR separated from Naval Sea Systems Command (NAVSEA) and Navy Acquisition Executive	That was a guideline, not an imperative	Basic requirement was to collocate the Navy Acquisition Executive with SPAWAR and NAVSEA	R & A staff accepts Navy positions
Move to San Diego could compromise military effectiveness.	Move to San Diego would improve SPAWAR's military effectiveness.	Move to San Diego would compromise SPAWAR's military effectiveness.	Move to San Diego would improve SPAWAR's military effectiveness, but might slow/prevent joint efforts.

ISSUES

Space and Naval Warfare Systems Command, Arlington, VA Redirect (Continued)

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Facility costs in San Diego.	Costs are correctly stated in DoD COBRA.	Facility costs in San Diego are understated.	Revised COBRA includes rehabilitation costs
Presence in Washington, DC.	Headquarters detachment can represent SPAWARs with all Washington area sponsors.	Frequent, often daily, interface required with Washington, DC. area sponsors	Interface can be handled with sufficiently large Washington detachment.
Size of Washington detachment	15 person Washington detachment can adequately represent	15 person Washington detachment can not adequately represent	Revised COBRA includes 50 person detachment
SPAWAR separated from other organizations involved with C4I.	Collocation with subordinate commands and fleet more important.	SPAWAR separated from other C4I organizations	R & A staff accepts Navy positions
Relocating to San Diego could affect recruiting and retention of qualified work force	Does not agree	Relocating to San Diego would affect recruiting and retention of qualified work force	Relocating to San Diego should not affect recruiting and retention of qualified work force
COBRA excursion adjusts for rehabilitation costs and realistic number of personnel in Washington detachment:	Extra Washington personnel and refurbishment costs not required	More personnel needed in Washington. Construction required in San Diego.	NPV : \$348.1 M 1-time costs \$ 27.8 M Recurring savings: \$ 24.7 M

SCENARIO SUMMARY

Space and Naval Warfare Systems Command, Arlington, VA

Redirect

DoD RECOMMENDATION	
(State DoD recommendation)	
One Time Costs (\$M): Steady State Savings (\$M): Return on Investment: ____ years (2001) Net Present Value (\$M):	
PRO	CON
<ul style="list-style-type: none"> • Eliminates management levels. • Cost of consolidation in Washington in comparison to that in San Diego 	<ul style="list-style-type: none"> • Importance of location in Washington, DC. • Cost of consolidation in Washington in comparison to that in San Diego. • DoD Committee recommended Monmouth as a receiver. • Proposal separates SPAWAR from NAVSEA and Navy Acquisition Executive

	<ul style="list-style-type: none">• Proposal separates SPAWAR from C4I systems, technologies, and commands• Risk of DC contingent to work under new paradigm
--	---

WASHINGTON AREA COMMANDS C4I COMMUNITY

Advanced Research Projects Agency	Naval Computer and Telecommunications Command
Ballistic Missile Defense Organization	Naval Research Laboratory
Central Intelligence Agency	Naval Sea Systems Command
Defense Airborne Reconnaissance Office	Naval Space Command
Defense Information Systems Agency	Navy Acquisition Executive
Department of Commerce (NOAA)	NISE East St. Inigoes
Defense Intelligence Agency	Office of Naval Intelligence
Marine Corps Headquarters	Office of the Chief of Naval Research
Mine Undersea Warfare Program Office	PEO for Theater Air Defense
National Reconnaissance Office	Special Operations Command
National Security Agency	U.S. Customs Service (drug programs)

PLEASE PUT UP SLIDES I-2 AND I-3

IN BRAC 93, THE COMMISSION DECIDED THAT SPACE AND NAVAL WARFARE SYSTEMS COMMAND, SPAWAR, ARLINGTON, VA RELOCATE “TO GOVERNMENT-OWNED SPACE WITHIN THE NCR (NATIONAL CAPITAL REGION).” THE RECOMMENDATION BEFORE YOU IS TO RELOCATE SPAWAR IN GOVERNMENT-OWNED SPACE IN SAN DIEGO, CALIFORNIA, TO ALLOW CONSOLIDATION OF THE NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER, OR NCCOSC, WITH THE SPACE AND NAVAL WARFARE COMMAND HEADQUARTERS.”

THE SUMMARIZATION OF THE COBRA RESULTS SHOWS THE ELIMINATION OF OVER 400 POSITIONS OR 38% OF ALL //NEARLY 42% OF CIVILIAN BILLETS. THIS MAKES POSSIBLE, ACCORDING TO THE NAVY’S COBRA, A SAVINGS WITH AN NPV OF \$360 MILLION AND AN IMMEDIATE PAYBACK. THE NAVY STATES THAT THE MOVEMENT OF SPAWAR TO SAN DIEGO, WHERE NCCOSC, NRAD, AND NISE WEST ARE WILL MAKE IT POSSIBLE TO ELIMINATE LAYERS OF MANAGEMENT AND TO HAVE PROJECT MANAGERS ON THE FLOOR WITH THEIR TECHNICAL TEAMS, RATHER THAN AN AIRPLANE FLIGHT AWAY

THE SPAWAR COMMUNITY WAS QUITE VOCAL IN ITS OPPOSITION. ALLOW ME TO PRESENT SOME OF THEIR MANY CONCERNS:

THE DOD JOINT CROSS-SERVICE GROUP RECOMMENDED THE CONSOLIDATION OF COMMAND, CONTROL, COMPUTERS COMMUNICATION AND INTELLIGENCE, OR C4I ACQUISITION AT FORT MONMOUTH, NJ. THIS RECOMMENDATION WAS IGNORED BY THE SERVICES. STAFF FINDS THIS SITUATION PARTICULARLY DISTRESSING AS COMMON

SENSE TELLS YOU THAT THE PROPOSED MOVE WILL DO NOTHING TO ADVANCE THE "PURPLE" CAUSE.

PLEASE REMOVE SLIDE I-3 AND PUT UP SLIDE I-4.

THE COMMUNITY POINTED OUT, CORRECTLY IN THE EYES OF THE STAFF, THAT COST FOR REFURBISHING THE SAN DIEGO FACILITIES WERE OMITTED.

PLEASE REMOVE SLIDE I-2 AND PUT UP SLIDE NBU-66.

THEY EXPLAINED IT IS ESSENTIAL TO MAINTAIN A STRONG WASHINGTON PRESENCE.. THEY CONDUCT FREQUENT MEETINGS AND HAVE CONSTANT INTERFACE WITH THE NUMEROUS WASHINGTON AREA C4I COMMANDS, SOME OF WHICH ARE ON THIS SLIDE. THE STAFF FOUND IT DIFFICULT TO BELIEVE THAT THE PROPOSED 15-PERSON WASHINGTON CONTINGENT COULD MAINTAIN PROPER CLIENT CONTACT AND REVISED THE NAVY PREPARED COBRA TO REFLECT THE ESTABLISHMENT INSTEAD A 50 PERSON WASHINGTON CONTINGENT. STAFFING WAS MADE POSSIBLE BY ELIMINATING OF TEN FEWER POSITIONS AND RELOCATING 25 FEWER BILLETTS TO SAN DIEGO.

AS PART OF ITS DISCUSSION OF THE NEED TO MAINTAIN A WASHINGTON PRESENCE, THE COMMUNITY INSISTED SPAWAR WOULD NEED AN ANNUAL ADDITIONAL TRAVEL BUDGET OF \$13.5 MILLION. THE NAVY SAID IT COULD AVOID INCREASES IN THE TRAVEL BUDGET BY 1) REPRESENTATION BY THE WASHINGTON DETACHMENT; 2) THE USE OF VTCS; AND 3) THE DECREASE IN REQUIRED TRAVEL BETWEEN SPAWAR AND NCCOSC.

THEY SUGGESTED SPAWAR AND NAVSEA BE MERGED OR COLLOCATED. THEY ALSO EXPLAINED THAT IF NCCOSC WERE ELIMINATED, POSITIONS DUPLICATED BY THE TWO SYSTEMS COMMANDS WERE REMOVED, AND EXCESS SPAWAR OVERHEAD WERE TRIMMED, EVEN GREATER SAVINGS COULD BE ACHIEVED.

FINALLY, THE COMMUNITY POINTED OUT THAT MUCH OF THE WORK OF INTEREST TO SPAWAR, SUCH AS INFORMATION SECURITY AND UNDERSEAS SURVEILLANCE, AND OTHER HIGHLY CLASSIFIED PROGRAMS, INVOLVES NO SPAWAR PERSONNEL OTHER THAN THOSE AT HEADQUARTERS. THUS, THE COMMUNITY POINTS OUT, MOVING SPAWAR TO SAN DIEGO WILL FURTHER SEPARATE SPAWAR FROM ITS CUSTOMERS.

THE REVISED COBRA, RUN BY THE STAFF, INJECTS FUNDS FOR REHABILITATION OF SPACE IN SAN DIEGO AND INCREASES THE SIZE OF THE WASHINGTON OFFICE, AS DESCRIBED ABOVE. AS YOU CAN SEE, THE IMPACT ON THE NET PRESENT VALUE ONLY REDUCES THE ESTIMATED SAVINGS BY \$12 MILLION TO \$348 MILLION.

DO YOU HAVE ANY QUESTIONS?

PLEASE TAKE DOWN SLIDES I-4 AND NBU-66

Systems Command, Arlington, VA
Redirect
(Continued)

ISSUE	DoD POSITION	COMMUNITY POSITION	R&A STAFF FINDINGS
Facility costs in San Diego.	Costs are correctly stated in DoD COBRA.	Facility costs in San Diego are understated.	Revised COBRA includes rehabilitation costs
Presence in Washington, DC.	Headquarters detachment can represent SPAWARs with all Washington area sponsors.	Frequent, often daily, interface required with Washington, DC. area sponsors	Interface can be handled with sufficiently large Washington detachment.
Size of Washington detachment	15 person Washington detachment can adequately represent	15 person Washington detachment can not adequately represent	Revised COBRA includes 50 person detachment
SPAWAR separated from other organizations involved with C4I.	Collocation with subordinate commands and fleet more important.	SPAWAR separated from other C4I organizations	R & A staff accepts Navy positions
Relocating to San Diego could affect recruiting and retention of qualified work force	Does not agree	Relocating to San Diego would affect recruiting and retention of qualified work force	Relocating to San Diego should not affect recruiting and retention of qualified work force
COBRA excursion adjusts for rehabilitation costs and realistic number of personnel in Washington detachment:	Extra Washington personnel and refurbishment costs not required	More personnel needed in Washington. Construction required in San Diego.	NPV : \$348.1 M 1-time costs \$ 27.8 M Recurring savings: \$ 24.7 M

Document Separator

DRAFT

DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION

SUMMARY SHEET

SPACE AND NAVAL WARFARE SYSTEMS COMMAND, ARLINGTON, VIRGINIA REDIRECT

INSTALLATION MISSION

To oversee the development of electronics programs, including Research and Development, planning, and implementation.

DOD RECOMMENDATION

- Change the BRAC 93 SPAWARS' recommendation from relocate "to Government-owned space within the NCR (National Capital Region)" to "to Government-owned space in San Diego, California, to allow consolidation of the Naval Command, Control and Ocean Surveillance Center, with the Space and Naval Warfare Command headquarters."
- This relocation does not include SPAWAR Code 40, which is located at the Naval Research Laboratory (NRL) in Washington, DC.
- This relocation does not include the Program Executive Officer for Space Communication Sensors and his immediate staff who will remain in Navy-owned space in the National Capital Region.

DOD JUSTIFICATION

- Administrative Activities must continue to reduce.
- Space available in San Diego permits further consolidation of the SPAWAR command structure and the elimination of levels of command structure.
- This consolidation will achieve not only significant savings from elimination of unnecessary command structure but also efficiencies and economies of operation.
- In addition, by relocating to San Diego instead of the NCR, there will be sufficient readily available space in the Washington Navy Yard for the Naval Sea Systems Command.

COST CONSIDERATIONS DEVELOPED BY DOD

- One-Time Cost: \$ 24.0 million
- Net Savings During Implementation: \$120.0 million
- Annual Recurring Savings: \$ 25.3 million
- Break-Even Year: Immediate
- Net Present Value Over 20 Years: \$360.0 million

DRAFT

MANPOWER IMPLICATIONS OF THIS RECOMMENDATION (EXCLUDES CONTRACTORS)

	<u>Military</u>	<u>Civilian</u>	<u>Students</u>
Baseline	230	930	0
Reductions	47	358	0
Realignments	154	502	0
Total	201	860	0

MANPOWER IMPLICATIONS OF ALL RECOMMENDATIONS AFFECTING THIS INSTALLATION (INCLUDES ON-BASE CONTRACTORS AND STUDENTS)

Out		In		Net Gain (Loss)	
<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>	<u>Military</u>	<u>Civilian</u>
201	860	0	0	(201)	(860)

ENVIRONMENTAL CONSIDERATIONS

- Likely will not have an adverse impact.
- Since San Diego is in a moderate non-attainment area for CO, a conformity determination may be required to evaluate air quality impacts.
- There is no adverse impact on threatened/endangered species, sensitive habitats and wetlands,

REPRESENTATION

Governor: George Allen
Senators: John Warner
Charles Robb
Representative: James Moran

ECONOMIC IMPACT

- Potential Employment Loss: 1821 jobs (1133 direct and 681 indirect)
- Washington, DC-MD-VA-WV MSA Job Base: 2,948,000 jobs
- Percentage: .1 percent decrease
- Cumulative Economic Impact 1996-2001: .6 percent decrease

MILITARY ISSUES

- None at this time.

DRAFT

COMMUNITY CONCERNS/ISSUES

- SPAWAR belongs in the Washington, D.C. area. It requires constant, daily contact, on a face-to-face level between various SPAWAR personnel and appropriate personnel from National Security Agency, Office of Naval Intelligence, Naval Research Laboratory, Naval Sea Systems Command, Department of the Army, Department of the Air Force, Naval In-Service Engineering (NISE) East
- There is significant travel required if SPAWAR moves to San Diego and those costs are not reflected in the COBRA.
- SPAWAR can internally accomplish the same savings by eliminating NCCOSC which community suggests is a duplicate layer of management and by eliminating overhead personnel from the SPAWAR headquarters organization.
- There will be a loss of key personnel who will be unwilling to move.

ITEMS OF SPECIAL EMPHASIS

- None at this time.

David Epstein/Navy/08/09/95 4:31 PM

DRAFT

ITEMS OF SPECIAL EMPHASIS

- How much will it cost to renovate space in San Diego?
- How much will it cost to renovate space in Washington Navy Yard, MCDEC, Navy Annex, White Oak, etc.?
- Are reductions in personnel proposed by the Navy for the San Diego move unachievable if they stay in the Washington area?
- How many additional trips will be needed to Washington and how many fewer trips will be needed to Naval Command, Control and Ocean Surveillance Center.

David Epstein/Navy/08/09/95 4:31 PM
p Y-11

- See 1/21/95 BSEC meeting Tab 42 -- SPAWAR relocation
-

hrs of govt employees

369,299

MY @ 1721

214.6

contractor 190,261

110.6

total 559,560

325.21

tasks(@173) 6,714

tonnage 3,572

equip \$7,932,878

~~THIS~~

\$33/hr costs don't
include leave, fringes

BOS, or even
actual salaries

2087

- 80 holiday

- 104 SL

- 182 7 (ave leave)

1721

proposed 2 kg

Mr. Tom Salmon SEA 00C2. (Title : Head, Salvage Operations Division, NAVSEA ((703) 607-2758)) His project has the deep submergence rescue vessel used to test deep ocean salvage systems designed for depths up to 20,000 feet. There are other testing facilities, including Carderock, but to conduct test at sites other than Annapolis, they must disassemble, transport, then reassemble or they can charter a ship or use a Navy ship. The Navy ship testing costs about \$250K, but ties up the ship; the charter ship costs about \$500K. Testing in Annapolis would cost \$30K - \$40K. It also means the DSRV is not available for submarine and related rescues. The vessel is 12' long, 8' x 6'. To test in the US, they must disassemble, ship, reassemble and reverse. The Navy has one other vessel capable of handling depths of up to 20,000 feet, but it is essentially only useable on its host platform in San Diego. This one can be flown (intact) anywhere in the world for rescue work. Except for this one and the one in San Diego, no other one can handle depths below 6,000 feet. Vessels can't be tested as a system anywhere else. He believes a UK facility shut down recently. His program can survive, but he can't test as an integrated system. Would have to charter ship and would cost \$250K. Week to load, 1-2 day testing, half week to offload. Could ship. Program is not killed, but impact and readiness are impacted. Disassemble or take out to sea -- either way first method of response is unavailable. Used to do inspection. Believes he uses Annapolis 2-3 times per year. He thinks his contractor, Oceaneering Technologies also uses Annapolis for its own work. He anticipates that use of NSWC will continue into the foreseeable future past 1999. He is not familiar with Southwest Research.

Steve Walsh ((703) 602-6636 PMS 395) (Title: Asst PM for Deep Submergence testing and vessels). He has conducted tests using the Deep Ocean Pressure facility within the past six to eight weeks. Used 10,000 PSI. Have done testing in past 6-8 weeks at 10,000 PSI (slightly deeper than 20,000 feet). They put power units in tanks and test and surrounded with TV cameras so they could watch what was happening from different cameras. Battelle will continue to do testing for him using these manipulators because prime contractor could not do work. He has had defect problems with DSV arms on Deep Submergence Vessels 3 and 4. There is a private firm, Southwest Research, he thinks in San Antonio which may have acceptable capability. It requires 3 month lead-time and costs one and one-half to twice as much. The Navy has two completed and one partially completed DSRV. The third is currently in San Diego, but needs to certify the third DSRV so it and its parts may be used to back up the other two. It has yet to be tested, but needs to test to 3000 PSI, (7500 feet). Worth keeping. He and programs he's aware of use about once a year -- more use is expected in the future, but its existence and capability were not well marketed in the past. A contractor Bill Sutter, was with SAIC, now independent Marine and Deep Ocean Applications and Systems 619 485-1839 may have insight into Southwest Research's capability. Also CAPT Bruce Williams has information about
classified PMS 395 602-6700

CAPT Bruce Williams ((703) 602-6700 PMS 395) (Title: PM for Deep Submergence testing and vessels). Said they can use other facilities which will be less convenient but are adequate. He said that there is no requirement to test DSRV in Annapolis. He did say there is a test which has to be performed in a 1996-8 time frame on a back-up to the DSRV. There is nowhere else this test could be performed.

Mr. Phil Covitch ((703) 602-0565 or 602-1921) SES and SEA 03T --- said Annapolis facility is only one in world with required capability to determine source of acoustic noise. The retention of the fluid dynamic facility is retention. It will be needed for the SSN and Seawolf projects. The Seawolf will use the Fluid Dynamics facility will be used for the next 12 - 18 months. Then, after Sea Trials, they will probably have to use the Fluid Dynamics facility to localize the source of any noises, which are inevitable. He stressed that there may be 20 - 30 pieces of equipment in close proximity to each other and to find the source of the problem through external measuring is extremely difficult because equipments cycle at different times. Without the Fluid Dynamics facility, they would also have to disassemble major submarine assemblies, ship them to a lab, test them, ship them back, then reassemble them. If the corrections were unsuccessful, the process would have to be repeated.. The SSN program will similarly use the facility from 1998 - 2003 then after construction and sea trials will once again need the Fluid Dynamics facility.

He stressed this is a World Class facility and that he knows of no alternatives to measure, evaluate, and eliminate self and transient noise. Mr. Covitch emphasized that Seawolf use for the Fluid Dynamics facility should be over by the end of 1997. SSN program will use the facility to find deficiencies thru at least 2003.

He sent a copy of a letter from COMNAVSEASYSCOM to COMNAVSURWARCEN expressing concern about the planned elimination of the facility.

CDR Marc Stewart (Deputy Program Manager New Attack Submarine (PMO 450)) ((703) 602-0330 x249)

Emphasized that the Fluid Dynamics Facility was unique in the world. He reminded me that it was built to facilitate an analysis of Thresher's sinking. The Fluid Dynamics facility is used to validate analytical predictions of acoustics problems. If there is no Fluid Dynamics Facility and if the analytical work overlooks something, newly constructed submarines may have unacceptable noise levels, resulting in very expensive equipment modifications. In addition, he predicted the Fluid Dynamics Facility had applications which had not yet even been thought of. There are no other places to conduct this type of testing. Testing can be used to analyze flows ranging from trickle leaks to major valve failures. He also pointed out that Philadelphia is too noisy to use for this type of testing. CDR Stewart also suggested I speak with Mr. Mike Locke of the Seawolf program ((703) 602-1444).

Mr. Michael Locke NAVSEA PMS 390 (T-245) GM-13 Seawolf Acoustic Silencing Manager ((703) 602-1444) He identifies places to do testing. Most of the issues he is concerned with are in High Pressure air, water, and hydraulics. All his testing is conducted at Annapolis, which has World Class facilities. The fluid dynamics facility has a 57,000 gallon tank to study noises in a quiet environment. As far as he knows, there is no other place to do testing. Issues come up during design and construction. Contractors subcontract to NSWC for help in assuring their solutions are effective. He anticipates that testing for SSN 21 and SSN 22 will continue through year 2000, and for SSN23 it will continue for years beyond 2000.

Transients are short duration energy pulses. Steady state sources have been worked on for a long time, but Mr. Locke noted that in 1980s it was discovered that clunks and hissing can facilitate tracking. The Navy must quiet transient noise sources across the board. He does not know where else the Navy can turn short of expensive testing through an acoustic range. Exuma Sound (Bahamas -- tongue of the ocean near AUTECH) is one place they can conduct live tests. It is very expensive as it uses the entire crew and hundreds of engineers. To conduct live tests, they must run through the range several times while it is monitoring them, then figure how to quiet and retest. In laboratory testing can be conducted and problems resolved in months. In a live environment it could take years. Testing costs the program \$100K per day and that doesn't even begin to cover the total costs, including steaming time, crew pay, hundreds of engineers traveling to Bahamas, etc. In the lab, they can correct a variety of components in a short period of time: months rather than years. It makes testing of subsafe boundaries much easier and less risky through repeated testing in quiet environment. Annapolis is the cornerstone in acoustic silencing.

ART SMOOKLER (03R16.) R & D Program Management Division of SEA 03

He's R&D Program Manager of the Navy's environmental R&D Program (Including auxiliary machinery items)

CFC Plan Testing 8 or 9 systems; may impact during move. Would delay introduction of equipment into the fleet. Depends on when facilities move. No impact after 1999 or thereabouts. Complete those test which are nearly done. May do move of some facilities before move. High speed reciprocating systems working, but compressors are still an issue. Should be little risk if program run properly. Risk if you don't test each type of equipment. Concern budget don't appear to have been done, but may have been done in BRAC process.

Also has magnetic program . Concern these are only appropriate facilities for each suite of equipment, new ships, etc. (Can upgrade Annapolis to do what White Oak does or v-v)

He called back to explain that at a recent NAVSEA meeting attended by CAPT Baskerville, various Annapolis and NAVSEA officials, it was decided that

- total cost of moving CFC-elimination equipment would total about \$13 M
- some equipment would not move, introducing some risk
- schedule for moving equipment would introduce some risk
- part of Annapolis facility would be kept open into early 1999

COBRA ITEMS

How much is required to correct inadequacies --62 and 63

Space is available for expansion -- 69, 70, 71, 72, 73

Are costs of Fire station in Phila being factored in??

What are Philadelphia's revenue producing resources? -- 87

Publications - 125& 126

What is Philadelphia's mobilization responsibility? 98

How does Carderock control air/range space of greater than 100 sqmi? 106

Location has natural features which are essential to mission Annapolis got points; what are features? Does Phila have these features? If not, how does Phila suffice? 143

Locations has synergy -- no points given for Naval Academy 144

Phila - does it have Natural Historic stuff 150

Quality of Life -- zero this

What percent of people in Annapolis are in technical ops 188

Loss impact 209, 210, 211

Document Separator

12 May 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Navy Technical Facilities -- Naval Surface Warfare Center Carderock,
Detachment Annapolis (hereafter, NSWC Annapolis)

1. The following questions were posed by Commissioner Montoya to NSWC Carderock during his 19 May 95 visit to NSWC Annapolis Detachment. Please immediately provide BSAT with the answers to these questions.

- With regard to the Deep Ocean Pressure Simulation Facility, please provide examples that would illustrate the impact of closing the facility or more specifically, how failure to test these items in the Deep Ocean Pressure Simulation Facility could result in the loss of a platform?
- With regard to the Submarine Fluid Dynamics Facility, is it possible to do these tests at sea? What would be the impact of doing so?

2. Please respond to the following questions regarding the Deep Ocean Pressure and Submarine Fluid Dynamics Facilities at NSWC Annapolis:

- The BSEC deliberations documentation provided to us mentions the high cost of relocating the Deep Ocean Pressure and Submarine Fluid Dynamics Facilities at Annapolis as a reason for not relocating it to Philadelphia. Please provide us with the data and the analysis of the data that was used by the BSEC and BSAT to determine that the loss of each of these two facilities would not add significant delay or cost to ongoing or planned Navy research programs.
- If not included in this data and analysis, describe the frequency and purpose of use of the Deep Ocean Pressure and Submarine Fluid Dynamics Facility over the previous two years, future plans for these projects as related to the two R & D facilities, and anticipated needs for such testing during the next ten -twenty years. How will testing for these programs as well as known future programs which are in the pipeline be conducted if these systems are abandoned?
- Please review on the enclosed letter from SEA-03 to NSWC Carderock regarding the need for the Submarine Fluid Dynamics facility and comment. SEA-00C and PMS-395 have expressed similar concerns about the Deep Ocean Pressure facility. Please comment regarding the need for these facilities.

3. The following questions deal with the Joint Spectrum Center, the primary tenant of NSWC Annapolis:

- Explain the reasons or advantages, if any, for Joint Spectrum Center being located on a military or other secure compound. Does the current location satisfy this requirement. If so, how? If not, why not or what would have to be done to make the location satisfactory?
- In discussions with BSAT personnel, it was explained that since BOS and RPMA costs were excluded from the data scenario, it makes sense not to include the rent which would be incurred were a tenant to move off base. That appeared to be a good explanation until I learned the details of the host-tenant agreement between NSWC Annapolis and its tenant, the Joint Spectrum Center. The net payment to NSWC in 1994 was about \$202 K. When that figure is contrasted with anticipated rent payment of \$1 Million per year, it appears an adjustment is needed. Comment and/or change the COBRA please.
- For each lease involving Joint Spectrum Center or its primary contractors in the Washington-Baltimore-Annapolis, list the annual rent, the number of square feet involved, special facilities, special requirements, and the date the lease expires (including an explanation of any options available to landlord and tenant).
- The Navy's COBRA did not reflect the savings associated with rent payments which could be avoided if JSC personnel currently occupying leased space in Annapolis and the Washington area, could be moved onto NSWC Annapolis after the personnel in the Materials Department of NSWC depart. For each location currently occupied by JSC personnel and/or its support contractor, Illinois Institute of Technology Research Institute,
 - What is the location and its occupants?
 - How many square feet of space do JSC employees and contractors occupy in every location?
 - How many people are located in each location?
 - What is the current rent?
 - When does the current lease expire?
 - What is the market rate rent at the location (i.e., if the lease were being renewed today, how much would the lease likely be for?)
 - What other costs are paid directly or indirectly by DoD, including taxes, utilities, janitorial service, etc. and what are those costs?
 - Are lease costs actual cost, or if GSA is involved, how much does GSA charge for rent?
 - What type of one-time costs and in what amounts would be involved in preparing space being vacated by Materials Department employees for JSC and IITRI personnel?
 - Is there sufficient space at NSWC for JSC and IITRI (or other personnel).

4. In the COBRA scenario, it appears that BSAT is assuming that the 40 personnel associated with the CFC project are not moving to Philadelphia. Should the COBRA be adjusted accordingly? If so, please do so. If not, please explain.

5. In calculating military value of technical centers, questions 124 and 125 deal with the number of published articles. Is the definition of the number of articles constant or for some bases does it refer to refereed publications, while for other bases does it refer to all publications?

6. Relative to staffing,

- What percentage of NSWC Annapolis's work is charged directly to client projects for 1993, 1994, 2001 (est.), and 2002 (est.)?
- What percentage of NSWC Philadelphia's work is charged directly to client projects for 1993, 1994, 2001, and 2002?
- NSWC Philadelphia is primarily an In-Service Engineering Activity, correct. Please provide data on the (anticipated) number of employees and the number of direct workyears for each year from 1993 through 2002. If the downsizing is not anticipated to be commensurate with reductions in the fleet, explain why.
- In enclosure (1) , page 1-2R of the COBRA scenario data call, it is explained 28 positions are unnecessary because of excess personnel at NSWC Philadelphia. Please explain why this is being calculated as a BRAC savings related to NSWC Annapolis, rather than a work structure savings unrelated to the BRAC process. Please modify the COBRA, as appropriate.

7. The certified data call shows moving costs for the eight components to be moved as \$78.1 M, yet the provided COBRA reflects an estimated one-time costs of \$25.0 M. Please explain and correct the COBRA, if appropriate.

8. There appear to be several problems with the COBRA and certified data:

- The Data Call on page 3-6R and 3-9R reflects only \$146K for phone hookups in 1996, yet the COBRA shows NSWC as having a requirement for \$3.873 M. Please explain the discrepancy and change the COBRA if appropriate.
- The COBRA does not include increased one-time program management and support expenses associated with the move.
- Associated with the increased MILCON should be the standard factors described overhead of 10% of the MILCON, or approximately \$1.5 or \$1.6 M.

9. During the Commissioner visit and since then, staff has been left with the impression that the lack of test platforms for 18 - 24 months will result in a loss, for each employee, of about 9 - 12 months of productive work. Please comment and modify your COBRA, if appropriate.

10. During the Commissioner visit, the Commissioner was told that several projects might be delayed by the proposed move and that the lead ship in several classes might be constructed without the systems under development. What is the cost, including retrofitting, logistics, training, etc. of the delay on each affected system? What is the probability of delay, to the point retrofitting will be necessary, of each major system being worked on by NSWC Annapolis?

11. COBRA Standards

- The COBRA standard input for Cost of Training is \$0, yet it would appear that a more realistic estimate of this cost is about 2 years salary phased over a 3-5 year period. This

reflects the absence of directly relevant college course work and the existence of relatively few engineers with relevant experience. The large turnover, particularly in retirements may result in large numbers of relatively untrained personnel. The absence of training costs is also particularly troubling given the high percentage of personnel with advanced degrees.

- COBRA's standard factor for retirement would appear to understate the situation at NSWC Annapolis, particularly given the large number of employees who recently accepted early retirement under the SIP program. Please justify the decision to use the standard factor or correct the COBRA, as appropriate.
- The low discount rate artificially inflates out-year savings. Please recalculate the COBRA, after all other changes are made, to reflect a discount rate of 5.0% and again to use 7.5% .
- The COBRA standard data uses a civilian turnover rate of 15%. What is the impact on cost if the turnover rate is 60% ? 75%? 90%? What is the impact on readiness? What is the impact associated with overtime, operations, training, etc., if turnover is significantly higher than anticipated?

13. What are the increased costs associated with NSWC's Philadelphia's responsibility for security and fire??

14. Please provide the draft NSWC Carderock budget submission which deals with the relocation of the Annapolis detachment. Please include sections for FYs 1996 - 2000.

27 April 1995

From: David Epstein
To: BSAT
Via: (1) Alex Yellin

Document Separator

1 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Navy Technical Facilities -- Naval Surface Warfare Center Carderock,
Detachment Annapolis (hereafter, NSWC Annapolis)

1. The following questions were posed by Commissioner Montoya to NSWC Carderock during his 19 May 95 visit to NSWC Annapolis Detachment. He anticipated responses directly from that base. Please immediately provide BSAT with the answers to these questions. BSAT comments on the NSWC response would be welcomed.

- With regard to the Deep Ocean Pressure Simulation Facility, please provide examples that would illustrate the impact of closing the facility or more specifically, how failure to test these items in the Deep Ocean Pressure Simulation Facility could result in the loss of a platform?
- With regard to the Submarine Fluid Dynamics Facility, is it possible to do these tests at sea? What would be the impact of doing so?

2. The following questions deal with the Joint Spectrum Center, the primary tenant of NSWC Annapolis. JSC apparently would move off base if and when NSWC is closed. BRAC personnel requested JSC to provide detailed information on lease, rehabilitation, and related costs associated with moving JSC's tenant onto the Base into space currently occupied by NSWC Annapolis personnel, including the employees moving to Carderock from the Materials Laboratory.

- Joint Spectrum Center would incur rent, estimated in the Certified Data, as \$1 Million per year. However, this rent is not reflected in the COBRA. Please explain why.
- Joint Spectrum Center's contractor (IITRI) would incur rent, utilities, security and other costs if it remains where it currently is or moves to other leased space. Please identify what the savings are if the contractor were to move on base. If BSAT doesn't believe these are costs are legitimate costs of the move, please provide them and explain the BSAT position. If the contractor charges the Government any G&A or other overhead costs to the rent costs, please explain the nature and amount of money associated with such additional costs.
- Please provide details of the current lease involving the JSC contractor, including the number of square feet of space, special requirements, lease payments, etc.
- Please explain why the COBRA shows no employees moving into leased space in/near Annapolis and what the implications are of this action.

4. In the COBRA scenario, it appears that BSAT is assuming that the 40 personnel associated with the CFC project are not moving to Philadelphia. However, the COBRA scenario states that the personnel associated with the CFC project are not to be moved to Philadelphia. Please explain why the number of personnel being realigned should not be 321 or modify the COBRA accordingly.

5. The certified data call shows moving costs for the eight components to be moved (including 281 personnel) as \$78.1 M, yet the provided COBRA reflects an estimated one-time costs of \$.25 M. Please explain and correct the COBRA, if appropriate.

5** Is it the BSAT's contention that no construction is required at NSWC Annapolis in conjunction with the proposed closure of NSWC Annapolis and related movement of certain assets to NSWC Annapolis? If this is not correct, please list required construction and the estimated cost of each project. If this is correct, please justify.

6. There appear to be several problems with the COBRA and certified data:

- The Data Call on page 3-6R and 3-9R reflects only \$146K for phone hookups in 1996, yet the COBRA shows NSWC as having a requirement for \$3.873 M. Please explain the discrepancy and change the COBRA if appropriate.
- The COBRA does not include increased one-time program management and support expenses associated with the move.
- Associated with the increased MILCON should be the standard factors described overhead of 10% of the MILCON, or approximately \$1.5 or \$1.6 M.

7. During the Commissioner visit, the Commissioner was told that several projects might be delayed by the proposed move and that the lead ship in several classes might be constructed without the systems under development. What is the cost, including retrofitting, logistics, training, etc. of the delay on each affected system? What is the probability of delay, to the point retrofitting will be necessary, of each major system being worked on by NSWC Annapolis?

8. Please comment on the enclosed letter regarding the impact of the base closure on the CFC replacement program.

2 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Naval Surface Warfare Center, Annapolis

1. The City of Philadelphia developed estimates for the cost of moving NSWC Carderock, Annapolis Detachment to Philadelphia, including an estimate of \$3.062 million in BRAC construction funds. They contrasted this with the Annapolis estimate of \$20.5 million. Please comment about your perception of the accuracy of both estimates.
2. The City of Philadelphia states that the staffs working on the CFC - elimination program from Philadelphia and Annapolis have equal numbers and experience. Is this correct, and if so, are the CFC staffs from both sites needed?
3. In discussing the Submarine Fluid Dynamic Capability at Annapolis, The City of Philadelphia maintains that NSWC Philadelphia currently has the facilities to perform over 95% of the air system testing currently performed at Annapolis. Is this correct? Does NSWC Philadelphia also have the capability to conduct water, hydraulic, and other testing methods available at Annapolis. From this and the list of other water flow facilities located throughout the United States, should BRAC conclude that the Fluid Dynamics Capability can be abandoned?
4. The City of Philadelphia wrote that the purpose of using simulation pressure tanks is to evaluate scale models of undersea hull structures, and therefore tank "A" at Annapolis could be abandoned. Is this logic correct and complete, and can the BRAC thus conclude that since there are other, smaller tanks, that Tank "A" can be abandoned?

5 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Naval Surface Warfare Center, Carderock Division, Annapolis Detachment

1. In the BSEC's deliberations, it appears that BSEC decided that under its scenario for NSWC Annapolis, 281 billets would be transferred from NSWC Annapolis to NSWC Philadelphia. The deliberations state that the CFC equipment would be moved, but not the personnel. It appears that current plans are to move the CFC personnel, but the number of billets to be moved has not been increased in the COBRA. Please explain.
2. Please provide an explanation of each instance in which the BSEC/BSAT does not agree with and did not use the certified data in the COBRA scenario relative to the fixed costs of moving NSWC Annapolis to NSWC Philadelphia. This question is intended to address ALL aspects of the one-time costs associated with the move. As part of your response, if your response involves using Government employees to assist in the move, please explain the number of employees who would do this and the duration of this assignment. If the salaries (reflecting assigned time) of these employees is less than the difference between the moving and calibration costs, as used by the BSAT and those reported in the COBRA scenario, explain how the BSAT explains away the remaining costs.
3. During several commissioner visits, BRAC was told that it would cost about \$17.5 Million to move the Magnetics facility to Carderock or another location, but only about \$5 M to upgrade the facility at either White Oak or \$2 M at Annapolis if one of those facilities is retained. However, it appears that the Annapolis COBRA has \$7 M for MILCON and the White Oak COBRA Scenario has \$1.9 M for non-MILCON purposes. BRAC staff was unable to identify the \$1.9 M in the COBRA. Please explain how the \$1.9 M appears in the White Oak COBRA and how the remaining \$8.6 M (\$17.5 M - \$1.9 M - \$7 M) is accounted for.
4. During the first Commissioner visit to Annapolis on March 27, BRAC was told of the contractor of the NSWC's tenant, Joint Spectrum Center and the lease for the contractor's approximately 600 people in Annapolis. The commissioners were told the contractor was in a lease which was soon to expire on Admiral Nimitz Boulevard in Annapolis. BRAC asked numerous questions regarding the lease and the adequacy of space at NSWC into which the contractor might move if NSWC is not closed. The response received from DISA etc. addressed some to the desired issues, but the following items are also of interest.

BRAC was provided with data, including an estimated renovation cost of \$11.7 M and a statement that the current lease is \$1.7 M. It is requested that the following questions relating to the lease be provided:

 - when does the current lease expire?
 - if the lease is due to expire in the next year, what is the estimated annual cost of a long-term lease?

- how many square feet of space is covered by the existing lease?
- what is the cost (mileage and employees time in travelling back and forth between JSC and IITRI's offices in Annapolis?)
- in addition to the \$1.7 M in lease payments, does the tenant or Government make any additional payments for items such as security, utilities, and taxes. If so, what items cost how much?
- does the contractor add any markup, such as overhead, G&A, fee, and/or profit to the rent, security, utilities, taxes and similar bills? If so, what items are the surcharges based on, what kind of surcharges are involved, and how much are they?

5 June 1995

From: David Epstein

To: BSAT

Via: (1) Alex Yellin

Subj: Naval Aviation Technical Services Facility, Philadelphia, PA

The community stressed that in 1993, the BRAC commission “found compelling the potential cost savings and reduction in workload among the Services of establishing a joint organization under the auspices of NATSF,” however there were no indications that this concept had been pursued. Please describe what if anything has been done by DoD to pursue this concept.

9 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Naval Surface Warfare Center, Annapolis and its CFC Elimination Program

1. The COBRA which is an enclosure to BSAT ltr LT-0755-F15 shows that all billets move by FY 98, with more than 85% of the personnel moving by the end of FY 97. It also reflects virtual elimination of BOS and RPMA costs at Annapolis by the end of FY98.
2. Staff has been told that at a recent NAVSEA meeting attended by various Annapolis and NAVSEA officials, it was decided that
 - total cost of moving CFC-elimination equipment would total about \$13 M
 - some equipment would not move, introducing some risk
 - schedule for moving equipment would introduce some risk
 - part of Annapolis facility would be kept open into early 1999
3. Staff was told in 6 June 95 BSAT ltr LT-0755-F15 that Fluid Dynamics Facility will be kept open to "support the NSSN program through the year 2000." Furthermore, your 9 June letter LT-0802-F16 says that "**R & D efforts at NSWC Annapolis are to be largely completed in FY 91.**"
4. Please comment and revise the COBRA to reflect changes in all costs, including RPMA and BOS costs to be incurred at least through the year 2001.
5. Alex --- let's discuss ---- We are concerned that BSAT's response may be that COBRA is a comparative tool . . .

11 June 1995

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Naval Surface Warfare Center, Annapolis Detachment

1. In your response to my 1 June fax regarding Commissioner Montoya's questions about the impact of performing tests at sea, you made no mention of the cost of such alternatives. It was our intention that the question about "impact" was also intended to refer to financial issues.

Accordingly, allow me to rephrase the questions as described below. If the fluid dynamics facility and the deep ocean pressure simulation facility are abandoned (please answer questions separately for each facility),

- Are there some types of testing which can not be done in an acceptable manner except through simulation testing?
- For testing which can be accomplished in the absence of the facilities, how much does the Navy estimate that such testing would have cost using the facilities to be abandoned and how much will it cost to conduct such testing in a live or other environment. Please attempt to quantify these as annual costs for facility testing and for alternative testing. If you are unable to provide annual estimates, please provide estimated costs using a) the facilities and b) a submarine for one test.
- Do the above cost estimates include costs such as salary and fringes for the crew? time for the ship or boat to reach the desired dry dock? time for the ship or boat in the desired dry dock? time for the ship or boat to get into position to conduct the test?

2. How much would it cost to move the two facilities from Annapolis to Philadelphia or to build new facilities in Philadelphia?

3. We anticipate that these questions will be resurfaced during the anticipated Commissioner visit scheduled for Monday, 19 June. Also, please be advised that the community has identified an estimate as to the costs involved in such testing.

From: David Epstein
To: BSAT

Via: (1) Alex Yellin

Subj: Navy Technical Facilities -- Naval Surface Warfare Center Carderock,
Detachment Annapolis (hereafter, NSWC Annapolis)

1. The following questions deal with each of two systems at NSWC which are slated to be abandoned, 1) the Deep Ocean Pressure and 2) Submarine Fluid Dynamics Facility

- The BSEC deliberations documentation provided to us mentions the high cost of relocating the Deep Ocean Pressure and Submarine Fluid Dynamics Facilities at Annapolis as a reason for not relocating it to Philadelphia. Please provide us with the data and the analysis of the data that was used by the BSEC and BSAT to determine that the loss of each of these two facilities would not add significant delay or cost to ongoing or planned Navy research programs.
- If not included in this data and analysis, describe the frequency and purpose of use of the Deep Ocean Pressure and Submarine Fluid Dynamics Facility over the previous two years, future plans for these projects as related to the two R & D facilities, and anticipated needs for such testing during the next ten -twenty years. How will testing for these programs as well as known future programs which are in the pipeline be conducted if these systems are abandoned?
- Provide the project names, and project manager names and phone numbers of the Navy project managers at NAVSEA, NAVAIR, etc. who are responsible for the major projects which were recently, are, or are soon to be tested at Annapolis or at back-up facilities. Indicate the number of WY performed and funding provided on each project during FY93, 94, and 95 (to date). The list of projects should include at least all projects which used the equipment in the past two years.
- Please review on the enclosed letter from SEA-03 to NSWC Carderock regarding the need for the Submarine Fluid Dynamics facility and comment. SEA-00C and PMS-395 have expressed similar concerns about the Deep Ocean Pressure facility. Please comment regarding the need for these facilities.
- What is the annual additional cost of testing through alternative means, including "steaming time," military pay. Please explain the meaning of "steaming time" -- does this include a depreciated cost on the submarine, fuel, etc.
- What facilities do you propose utilizing to substitute for each facility.

2. The following questions deal with the Joint Spectrum Center, the primary tenant of NSWC Annapolis:

- Explain the reasons or advantages, if any, for Joint Spectrum Center being located on a military or other secure compound. Does the current location satisfy this requirement. If so, how? If not, why not or what would have to be done to make the location satisfactory?
- In discussions with BSAT personnel, it was explained that since BOS and RPMA costs were excluded from the data scenario, it makes sense not to include the rent which would be incurred were a tenant to move off base. That appeared to be a good explanation until I learned the details of the host-tenant agreement between NSWC Annapolis and its tenant, the Joint Spectrum Center. The net payment to NSWC in 1994 was about \$202 K. When that figure is contrasted with anticipated rent payment of \$1 Million per year, it appears an adjustment is needed. Comment and/or change the COBRA please.
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 - Is there sufficient space at NSWC for JSC and IITRI (or other personnel).

3. In calculating military value of technical centers, questions 124 and 125 deal with the number of published articles. Is the definition of the number of articles constant or for some bases does it refer to refereed publications, while for other bases does it refer to all publications?

4. Relative to staffing,

- What percentage of NSWC Annapolis's work is charged directly to client projects for 1993, 1994, 2001 (est.), and 2002 (est.)?
- What percentage of NSWC Philadelphia's work is charged directly to client projects for 1993, 1994, 2001, and 2002?
- NSWC Philadelphia is primarily an In-Service Engineering Activity, correct. Please provide data on the (anticipated) number of employees and the number of direct workyears for each year from 1993 through 2002. If the downsizing is not anticipated to be commensurate with reductions in the fleet, explain why.
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6. There appear to be several problems with the COBRA and certified data:

- The provided COBRA only show \$8 M for MILCON for Carderock while the cost of the Electro-Magnetic Fields Laboratory was estimated at \$15 M. Please explain and add the \$7M to the COBRA if appropriate. (Or does the \$8M include \$1 M for the Nike site transfer, in which case the EMF MILCON understatement is \$8 M?)
- The Data Call on page 3-6R and 3-9R reflects only \$146K for phone hookups in 1996, yet the COBRA shows NSWC as having a requirement for \$3.873 M. Please explain the discrepancy and change the COBRA if appropriate.
- The COBRA does not include increased one-time program management and support expenses associated with the move.
- Associated with the increased MILCON should be the standard factors described overhead of 10% of the MILCON, or approximately \$1.5 or \$1.6 M.

7. Does the figure of 280 positions to be realigned include the approximately 40 in support of the CFC program?

8. During the Commissioner visit and since then, staff has been left with the impression that the lack of test platforms for 18 - 24 months will result in a loss, for each employee, of about 9 - 12 months of productive work. Please comment and modify your COBRA, if appropriate.

9. During the Commissioner visit, the Commissioner was told that several projects might be delayed by the proposed move and that the lead ship in several classes might be constructed without the systems under development. What is the cost, including retrofitting, logistics, training, etc. of the delay on each affected system? What is the probability of delay, to the point retrofitting will be necessary, of each major system being worked on by NSWC Annapolis?

10. COBRA Standards

- The COBRA standard input for Cost of Training is \$0, yet it would appear that a more realistic estimate of this cost is about 2 years salary phased over a 3-5 year period. This reflects the absence of directly relevant college course work and the existence of relatively few engineers with relevant experience. The large turnover, particularly in retirements may result in large numbers of relatively untrained personnel. The absence of training costs is also particularly troubling given the high percentage of personnel with advanced degrees.
- COBRA's standard factor for retirement would appear to understate the situation at NSWC Annapolis, particularly given the large number of employees who recently accepted early retirement under the SIP program. Please justify the decision to use the standard factor or correct the COBRA, as appropriate.
- The low discount rate artificially inflates out-year savings. Please recalculate the COBRA, after all other changes are made, to reflect a discount rate of 5.0% and again to use 7.5% .
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11. What are the increased costs associated with NSWC's Philadelphia's responsibility for security and fire??

12. Please provide the draft NSWC Carderock budget submission which deals with the relocation of the Annapolis detachment. Please include sections for FYs 1996 - 2000.

13.

PROPOSED QUESTIONS TO BE DISCUSSED ON MONDAY:

1. HOW MANY CFC EMPLOYEES WILL MIGRATE TO PHILA?
2. WHEN ARE YOU PREPARED TO CLOSE NSWC ANNAPOLIS -- IS IT 1998, AS DOCUMENTED IN THE COBRA OR IS IT 2001 AFTER MOST OF THE NSSN, SEAWOLF, AND CFC WORK IS COMPLETED?
3. DEEP DEPTH SIMULATION FACILITY
 - HOW MANY TESTS DID YOU CONDUCT ON THE DEEP DEPTH SIMULATION FACILITY DURING 1992, 1993, 1994, AND 1995? WERE THESE TESTS ALL ON NEW SYSTEMS? (PLEASE RESTRICT YOUR ANSWER FOR THIS AND ALL QUESTIONS TO TESTING DONE BY OR FOR THE NAVY)
 - AFTER INTRODUCTION OF A PLATFORM, DOES IT EVER COME BACK TO THIS FACILITY FOR ADDITIONAL TESTING?
 - HOW MANY TESTS DO YOU ENVISION WILL BE CONDUCTED DURING EACH OF THE NEXT 5 YEARS? 10 YEARS? 20 YEARS?
 - ON AVERAGE, HOW MUCH DOES IT COST TO CONDUCT A TEST USING THIS FACILITY?
 - ON AVERAGE, HOW MUCH DOES IT COST TO CONDUCT A TEST USING OTHER METHODS?
 - DO THESE FIGURES INCLUDE COSTS SUCH AS MILITARY PERSONNEL, COSTS OF USING A DRYDOCK (USING STANDARD SHIPYARD CHARGES), A REASONABLE DAILY RATE FOR THE USE OF A SUBMARINE, ETC. PLEASE EXPLAIN YOUR ANSWER.
4. FLUID DYNAMICS FACILITY
 - HOW MANY TESTS DID YOU CONDUCT ON THE DEEP DEPTH SIMULATION FACILITY DURING 1992, 1993, 1994, AND 1995? WERE THESE TESTS ALL ON NEW SYSTEMS? (PLEASE RESTRICT YOUR ANSWER FOR THIS AND ALL QUESTIONS TO TESTING DONE BY OR FOR THE NAVY)
 - AFTER INTRODUCTION OF A PLATFORM, DOES IT EVER COME BACK TO THIS FACILITY FOR ADDITIONAL TESTING?
 - HOW MANY TESTS DO YOU ENVISION WILL BE CONDUCTED DURING EACH OF THE NEXT 5 YEARS? 10 YEARS? 20 YEARS?
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- 5.
- 6.